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May 78

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Water resources data for the 1977 water year for Maryland and Delaware consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains discharge records for 107 gaging stations; stage and contents for 1 reservoir; water quality for 53 gaging stations and 37 wells; and water levels for 29 observation wells. Also included are data for 87 low-flow partial-record stations, 19 crest-stage partial-record stations, and 4 tidal crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Maryland and Delaware.

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Water Year 1977

U.S. DEPARTMENT OF THE INTERIOR
MARCH 3, 1849

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-77-1

Prepared in cooperation with the States of Maryland and
Delaware and with other agencies

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U. S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

CALENDAR FOR WATER YEAR 1977

1976

OCTOBER

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1977

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Water Resources Data
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U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-77-1

Prepared in cooperation with the States of Maryland
and Delaware and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

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[*Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation and contents*]

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WATER RESOURCES DATA FOR MARYLAND AND DELAWARE, 1977

INTRODUCTION

Water resources data for the 1977 water year for Maryland and Delaware consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains discharge records for 107 gaging stations; stage and contents for 1 reservoir; water quality for 53 gaging stations and 37 wells; and water levels for 29 observation wells. Also included are data for 87 low-flow partial-record stations, 19 crest-stage partial-record stations, and 4 tidal crest-stage partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Maryland and Delaware.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report MD-DE-77-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

COOPERATION

The U.S. Geological Survey and organizations of the State of Maryland have had cooperative agreements for the systematic collection of streamflow records from 1896 to 1909 and since 1924, for ground-water levels since 1943, and for water-quality records since 1958. Similar agreements between the Survey and organizations of the State of Delaware began in 1943 for streamflow records and 1949 for water-quality records. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Maryland Geological Survey, K. N. Weaver, director.

Delaware Geological Survey, R. R. Jordan, State geologist.

Maryland State Highway Administration, B. M. Evans, administrator.

Delaware Department of Highways and Transportation, R. A. Haber, director of highways.

Maryland Department of Health and Mental Hygiene, Environmental Health Administration, D. H. Noren, director.

District of Columbia Department of Environmental Services, W. C. McKinney, director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, for 24 gaging stations; by the Water Quality Office, Environmental Protection Agency, for 3 gaging stations; and by the National Park Service, U.S. Department of the Interior, for 1 station.

The following organizations aided in collecting records:

Delaware: State Department of Natural Resources and Environmental Control, and New Castle County.

Maryland: Maryland Water Resources Administration; Washington Suburban Sanitary Commission; Upper Potomac River Commission; Anne Arundel, Baltimore, Harford, and Howard Counties; Potomac Electric Power Co.; and Virginia Electric Power Co.

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

Maryland and Delaware district personnel who contributed significantly to the collection and preparation of the data in this report were: W. B. Solley, Chief, Network Operations Section, assisted by Philip Pfannebecker, R. W. James, Jr., W. E. Webb, and M. E. Walters.

HYDROLOGIC CONDITIONS

Streamflow was in the excessive range (upper 25 percent of record) throughout the bistate area as the 1977 water year began, and was in the normal range during November and December. Streamflow generally decreased into the below normal or deficient range (lower 25 percent of record) for much of the remainder of the year. Heavy rains on October 8th and 9th caused severe flooding in central Maryland, particularly in the Frederick area where Carroll Creek overflowed its banks and caused considerable damage. Record high peaks occurred at several gaging stations in Frederick County draining both flanks of Catoctin Mountain.

Streamflow at the index station, Potomac River at Paw Paw, W. Va., averaged 3,146 ft^3/s (89.1 m^3/s), 107 percent of normal, reference period, 1941-70. The average flow at the index station, Seneca Creek near Dawsonville, Md., was 86.6 ft^3/s (2.45 m^3/s), 106 percent of normal. At the index station, Choptank River near Greensboro, Md., monthly flows ranged from a high of 110 ft^3/s (3.12 m^3/s), 46 percent of median in March, to 9.49 ft^3/s (0.27 m^3/s), 35 percent of median in July. Streamflow was in the deficient range from February through August, with record monthly low flows recorded in May, June, and July. The annual mean discharge was only 49 percent of normal and averaged 55.2 ft^3/s (1.56 m^3/s).

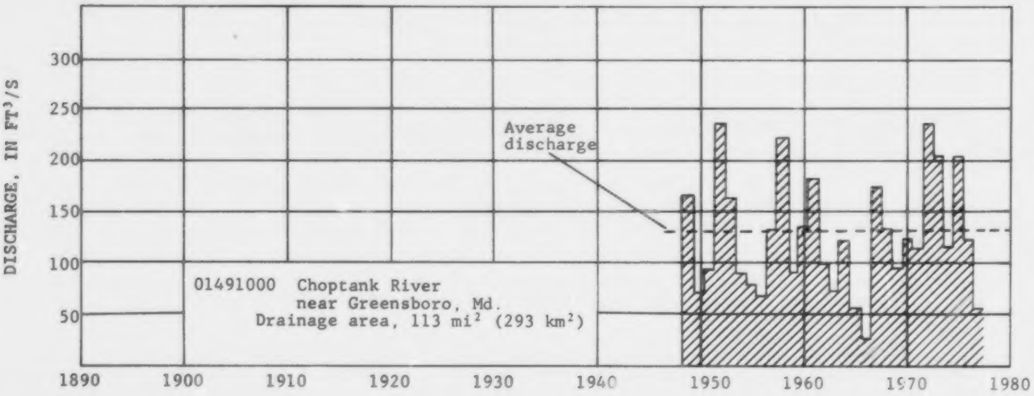
Average fresh-water inflow to the Chesapeake Bay was estimated at 75,000 ft^3/s (2,120 m^3/s), which is equal to the long-term average, reference period, 1952-77. A record-high inflow of 174,000 ft^3/s (4,930 m^3/s) for October, occurred as the water year began, and above average inflows occurred in November, March, April, and September. A record-low inflow for February was estimated at 34,000 ft^3/s (963 m^3/s) and near- record low inflows occurred during May and June.

Although the monthly flows at the index station, Potomac River near Washington, D. C., adjusted for diversions, were in the deficient range for January, February, and from May through September, the minimum monthly flow of 1,570 ft^3/s (43.6 m^3/s) in September was nearly three times the quantity of water diverted for municipal supply during the month. The yearly flow averaged 12,310 ft^3/s (349 m^3/s), 97 percent of normal.

Annual mean discharge is compared with the long-term average discharge for two representative gaging stations in figure 1. Data for the station, Potomac River at Point of Rocks, Md., reflects runoff conditions in the Potomac River basin, excluding the Coastal Plain. Data for the station, Choptank River at Greensboro, Md., reflects runoff from a 113 mi^2 (293 km^2) area, of which 21.6 mi^2 (34.8 km^2) is in Delaware in the central part of the Delmarva peninsula.

The combined storage in the three major water-supply reservoirs in the Baltimore City Municipal System was 82 percent of average on September 30, 1977, or about 60,700,000,000 gal (230 hm^3), a decrease of 23 percent from the end of last year and 71 percent of the usable capacity of 85,340,000,000 gal (323 hm^3). This represents the lowest combined storage since January 1970.

At the end of the water year, water-level measurements indicated that the water table was generally lower throughout the bistate than it had been the year before. In the Appalachian region, the average net decline in the observation wells was 2.70 ft (0.823 m); in the Piedmont it was 3.75 ft (1.143 m); in the southern part of the Western Shore it was 1.74 ft (0.530 m); and on the Eastern Shore it was only 0.40 ft (0.122 m). Although the water level was lower in most water-table wells than it had been for some years, record low levels were reached in only three observation wells, all in Montgomery County in the Piedmont province. In several wells on the Eastern Shore, the water table was higher than a year ago.



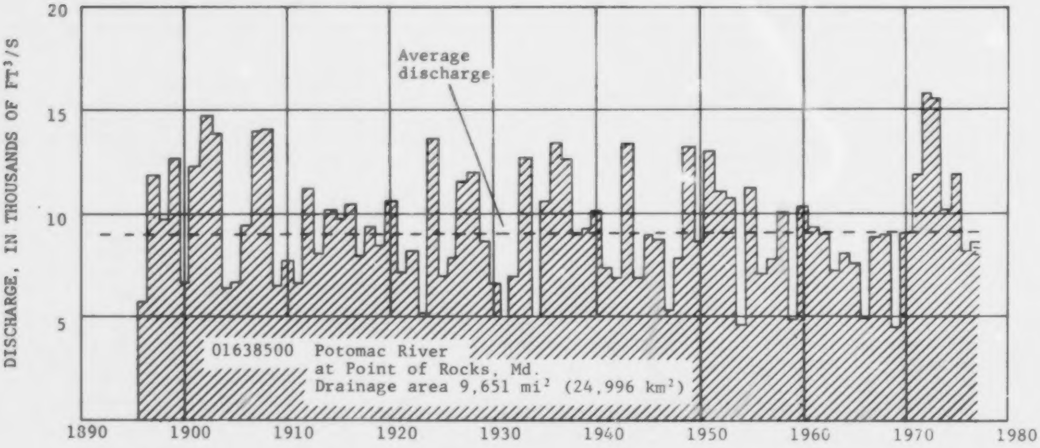


Figure 1.-- Annual mean discharge at two gaging stations in Maryland.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting English units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is the primary energy donor in cellular life process. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, ug/l) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation.
Silt..........	.004 - .062	Sedimentation.
Sand..........	.062 - 2.0	Sedimentation or sieve.
Gravel........	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg $C/(m^2.time)$ for periphyton and macrophytes and mg $C/(m^3.time)$] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon-14 method is of greater sensitivity than the oxygen light-and-dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg $O_2/(m^2.time)$ for periphyton and macrophytes and mg $O_2/(m^3.time)$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light-and-dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

(tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water per unit of time flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexageria
Species	Hexagenia limbata

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WDR is used as an abbreviation for "Water Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in SURVEY reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 01477800, which appears just to the left of the station name, includes the 2-digit part number "01" plus the 6-digit downstream order number "477800."

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 2 below.

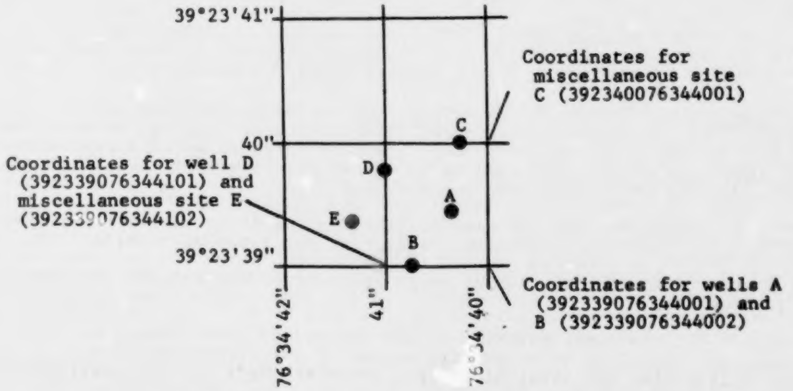

39°23'41"
Coordinates for miscellaneous site C (392340076344001)
40"
C
Coordinates for well D (392339076344101) and miscellaneous site E (392339076344102)
D
A
E
B
39°23'39"
Coordinates for wells A (392339076344001) and B (392339076344002)
76°34'42"
41"
76°34'40"

Figure 2. System for numbering wells and miscellaneous sites (latitude and longitude)

A second well-numbering system used in Maryland utilizes the county prefix and a 5-minute grid. The first 2 to 4 letters of the identification number are the county prefix; for example, for Charles County the prefix is Ch and for Dorchester County the prefix is Dor. Each county is divided by 5-minute quadrangles of latitude and longitude. Each quadrangle, from north to south, is designated by an uppercase letter, and west to east by a lowercase letter. The wells are numbered serially within each quadrangle. A similar system used in Delaware divides the state, rather than the counties, by 5-minute quadrangles of latitude and longitude which are designated as explained above. Each 5-minute quadrangle is further subdivided by 1-minute quadrangles. Each of the 1-minute quadrangles from north to south is designated by a number from 1 to 5, and west to east by a number from 1 to 5. Thus ID 55-1 is the first well inventoried in the southeast 1-minute quad of the ID 5-minute quadrangle of Delaware.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data-collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables; then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrologists and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

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At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations, there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise, daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations, information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations, peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs, the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs, a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22902, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface-water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 2.

Measurements are made in many types of wells under varying conditions of access and at different temperatures; hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will insure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and at the end of each month (EOM).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office. Prices are effective January 1978 but are subject to change.

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature-influential factors, field measurement, and data presentation,* by H. H. Stevens Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. $1.60.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W.W.Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages. $0.85

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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. $1.90.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. $1.75.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. $1.00.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. $0.35.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. $1.00.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.35.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. $1.00.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $1.40.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. $1.20.

3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2 1976. 172 pages. $2.50.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $0.65.

3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages. $2.50.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $2.10.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. $1.60.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $0.35.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. $0.65.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.65.

4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. $1.10.

5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases*, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

5-A2. *Determination of minor elments in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. $20.00.

5-A5.* *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. $16.00.

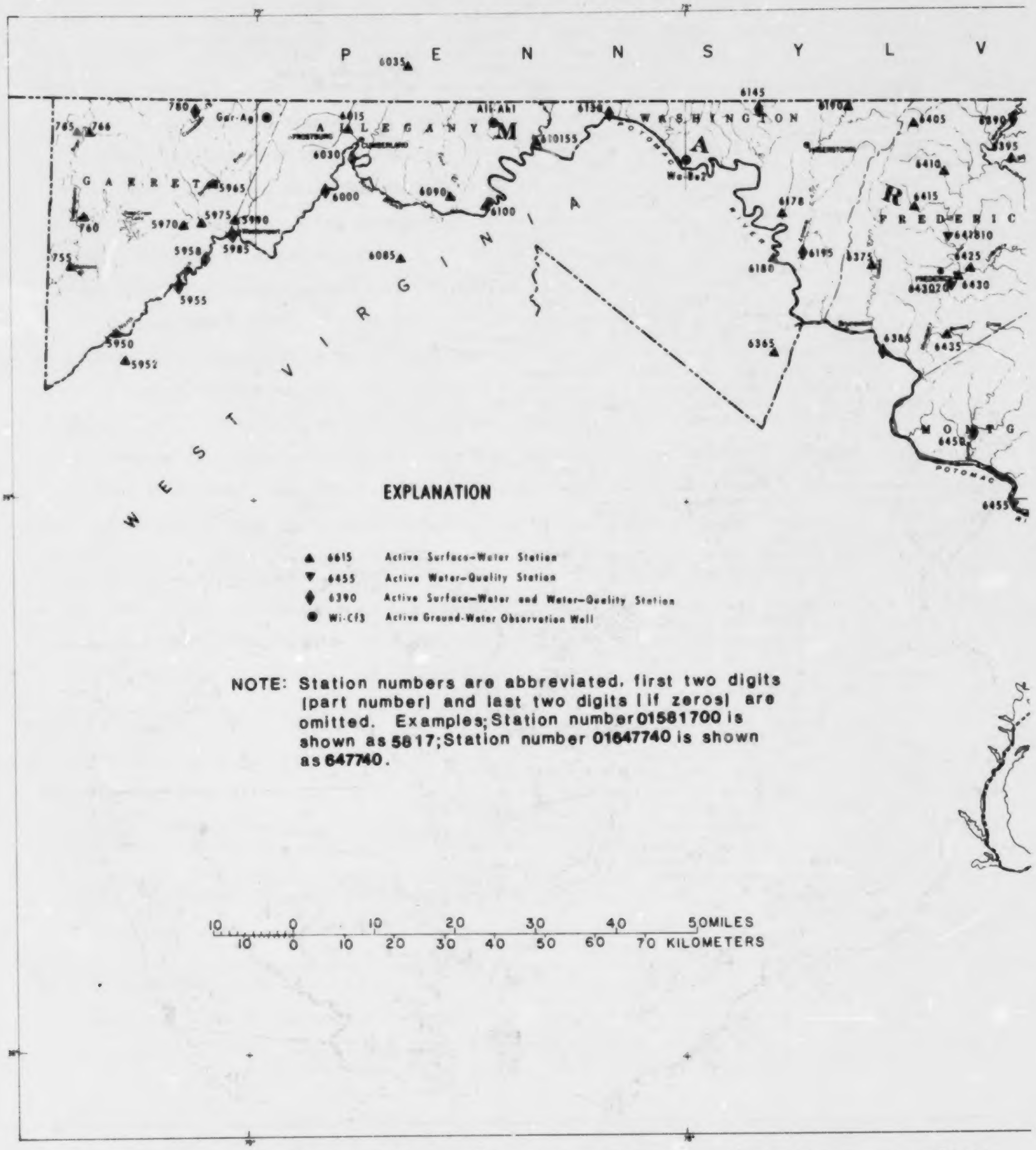
5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $2.10.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages. $2.30.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. $0.70.

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in looseleaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.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WEST VIRGINIA
MA
GARRETT
ALLEGANY
WASHINGTON
FREDERIC
MONTG
POTOMAC
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765
766
780
Gar-Ag
6015
6030
All-Ab1
6136
6145
6190
6405
6390
6395
6410
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6420
6425
6430
643020
6435
6450
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6385
6365
6375
6195
6178
6180
Wa-Be2
010155
6000
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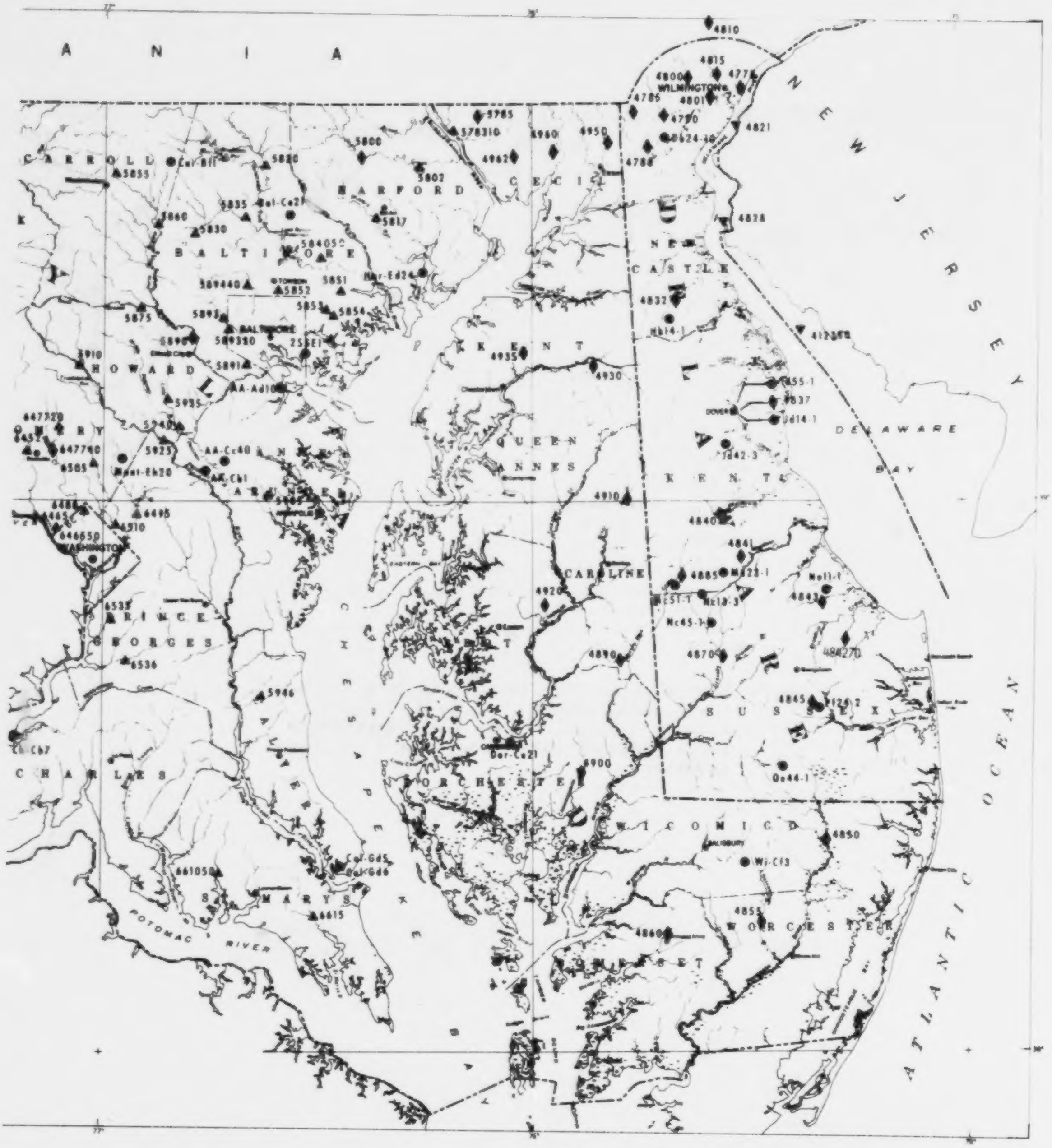
5952
760
755
10 0 10 20 30 40 50 MILES
10 0 10 20 30 40 50 60 70 KILOMETERS

EXPLANATION

▲ 6615 Active Surface-Water Station
▼ 6455 Active Water-Quality Station
◆ 6390 Active Surface-Water and Water-Quality Station
● Wi-Cf3 Active Ground-Water Observation Well

NOTE: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples; Station number 01581700 is shown as 5817; Station number 01647740 is shown as 647740.

Figure 3. Location of surface-water and water-quality stations and ground-water observation wells in Maryland and Delaware.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BALTIMORE
BALTIMORE
HOWARD
KENT
QUEEN ANNES
NEW CASTLE
WILMINGTON
DOVER
KENT
CAROLINE
PRINCE GEORGES
WASHINGTON
CHARLES
CALVERT
ST MARYS
DORCHESTER
WICOMICO
SALISBURY
SUSSEX
WORCESTER
SOMERSET
CHESAPEAKE BAY
POTOMAC RIVER
NEW JERSEY
DELAWARE BAY
ATLANTIC OCEAN
4810
4815
4800
4778
4785
4801
4790
4821
4788
4828
4832
5785
578310
5800
5802
4960
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4962
5820
5855
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5817
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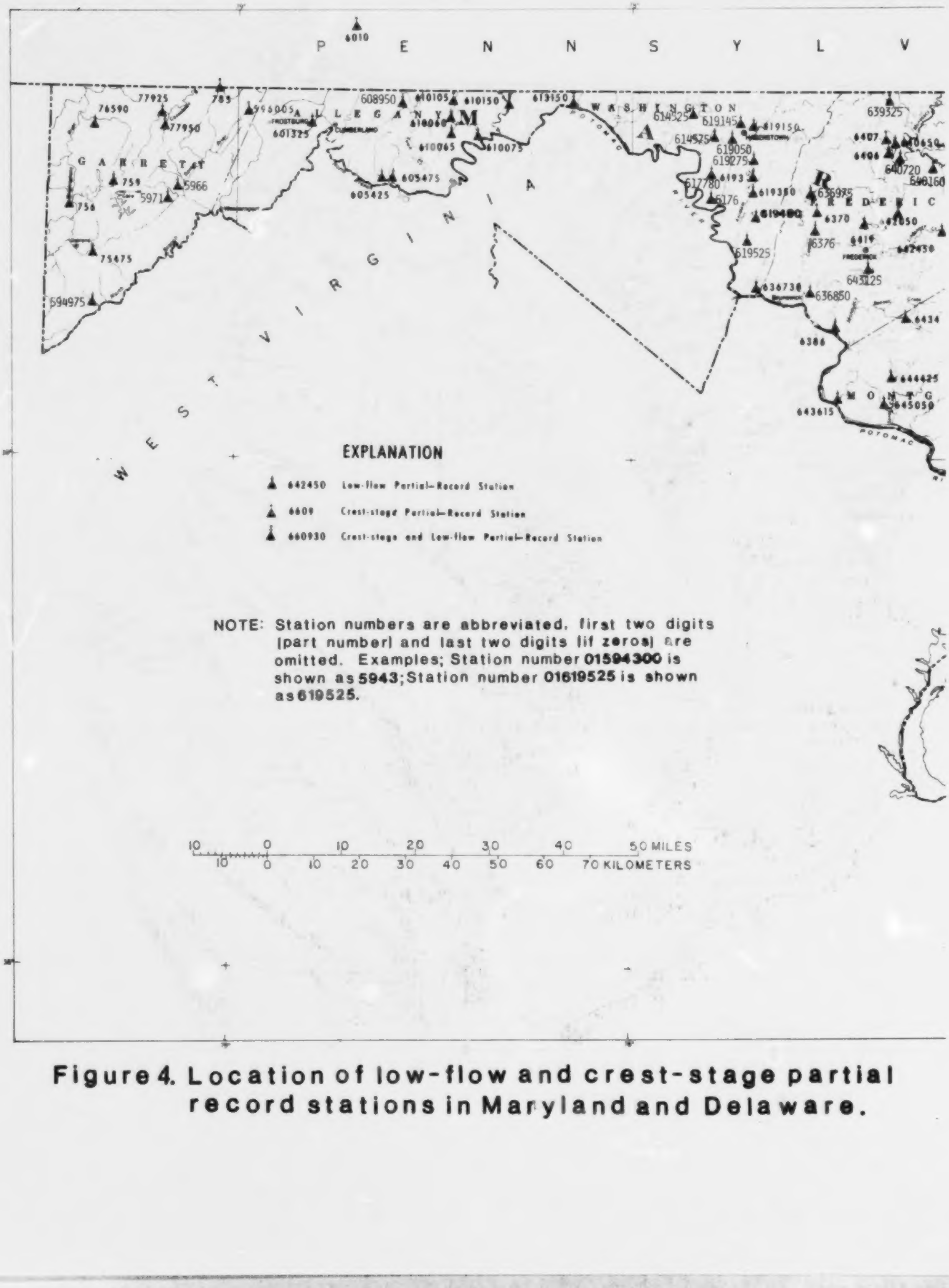
4855
4860
6505
6495
6536
5946
6615
661050
Wi-Cf3
Oe44-1
Dor-Ce21
Cal-Gd5
Cal-Gd6
Ch-Cb7
AA-Ad10
AA-Cc40
AA-Cb1
Har-Ed24
Ba-Ce21
Mont-Eh20
Car-Bf1
Nb14-1
Id55-1
Id42-3
Md11-1
Mc25-1
Mc45-1

Figure 2.--Location of surface-water and water-quality stations and ground-water observation wells in Maryland and Delaware


6010
P E N N S Y L V
W E S T V I R G I N I A
G A R R E T T
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W A S H I N G T O N
F R E D E R I C
M O N T G
FROSTBURG
CUMBERLAND
HAGERSTOWN
FREDERICK
POTOMAC
POTOMAC RIVER
76590
77925
785
77950
595005
601325
608950
610105
610150
613150
610060
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605475
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594975
614525
619145
619150
614575
619050
619275
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6176
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619480
619525
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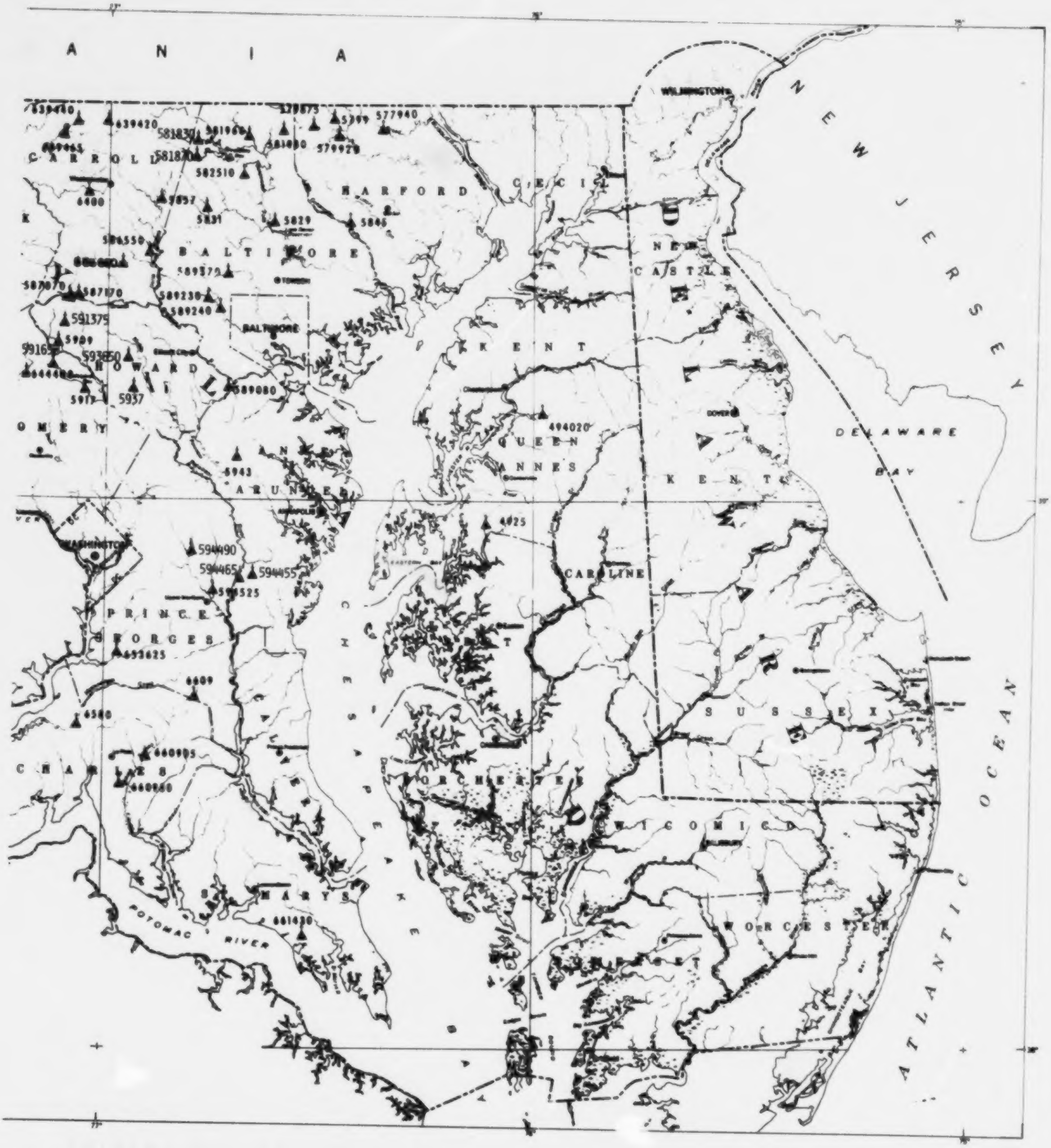
6370
6376
6419
643125
636730
636850
6386
6434
644425
643615
645050
639325
6407
6406
640650
640720
640160
641050
642438
EXPLANATION
642450 Low-flow Partial–Record Station
6609 Crest-stage Partial–Record Station
660930 Crest-stage and Low-flow Partial–Record Station
10 0 10 20 30 40 50 MILES
10 0 10 20 30 40 50 60 70 KILOMETERS

NOTE: Station numbers are abbreviated, first two digits (part number) and last two digits (if zeros) are omitted. Examples; Station number **01594300** is shown as **5943**; Station number **01619525** is shown as **619525**.

Figure 4. Location of low-flow and crest-stage partial record stations in Maryland and Delaware.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5799
579920
582510
C A R R O L L
6400
5857
5831
5829
5846
H A R F O R D
C E C I L
WILMINGTON
B A L T I M O R E
589379
589230
589240
BALTIMORE
591375
5909
593850
H O W A R D
5917
5937
589080
O M E R Y
A N N E
5943
A R U N D E L
K E N T
494020
Q U E E N
A N N E S
4925
WASHINGTON
594490
594465
594455
594525
P R I N C E
G E O R G E S
653625
6609
6580
660905
C H A R L E S
660980
C A R O L I N E
T A L B O T
D O R C H E S T E R
W I C O M I C O
W O R C E S T E R
S O M E R S E T
S T M A R Y S
661430
P O T O M A C R I V E R
C H E S A P E A K E
B A Y
N E W C A S T L E
K E N T
S U S S E X
DOVER
N E W J E R S E Y
D E L A W A R E
B A Y
A T L A N T I C O C E A N

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NORTH ATLANTIC SLOPE BASINS

DELAWARE BAY

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ

LOCATION.--Lat 39°18'19", long 75°22'37", Cumberland County, Hydrologic Unit 02040204, water-quality recorder on lightship in bay opposite Bombay Hook Island, Del., and 3 mi (4.8 km) south-southwest of mouth of Cohansey River, N. J.

PERIOD OF RECORD.--April 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1969 to current year.
WATER TEMPERATURES: February 1970 to current year.

REMARKS.--Water-quality monitor records less than 80 percent complete for most parameters. Extremes for period of record are those recorded when monitor was in operation.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 52,800 micromhos Feb. 10, 1970; minimum, 1,500 micromhos Mar. 4, 1971.
WATER TEMPERATURES: Maximum, 30.0°C Aug. 1, 1970, July 25, 1977; minimum, 0.0°C on many days during January, February, December 1976, January and February 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 31,100 micromhos Oct. 2; minimum, 1,140 micromhos Feb. 5.
WATER TEMPERATURES: Maximum, 30.0°C July 21; minimum, 0.0°C on many days during winter periods.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	30600	24500	27800	18100	11700	15500	22400	14600	18800	19100	14100	17000
2	31100	26500	28700	19700	11700	16200	21900	16000	18500	22600	15200	19000
3	29800	22200	27700	19200	13100	16300	22000	14200	18200	24600	17700	21400
4	30600	25100	27900	20400	12500	17200	21400	14600	18200	25400	20400	22900
5	30000	26400	28600	20000	13700	16900	20500	14300	18400	26200	20700	23800
6	29600	24500	28000	15900	11600	14300	22600	15100	19300	26400	21400	24300
7	28700	23300	26900	16400	9360	13400	23800	18000	20600	26700	20900	24100
8	28700	23100	26600	18000	11600	14500	21900	16100	19200	25600	18700	22200
9	30600	23300	26800	19000	11500	15800	19100	11800	16500	26400	20900	24000
10	25900	16200	21800	17600	11100	14600	19200	12600	16600	27600	22400	25300
11	24200	15600	21100	17500	11500	14900	17600	11600	15600	22700	15100	20200
12	24900	15000	21100	19200	13000	15800	19300	11800	16500	19300	9850	16700
13	24600	14100	20400	18500	11000	15000	19000	12300	15200	11300	9850	10500
14	22600	11900	17600	19300	12000	15600	18900	10800	15100	11000	9220	10300
15	23800	12000	16900	20900	13700	17200	18100	11800	15500	13200	9530	11200
16	20900	11400	16900	22100	16000	18900	20300	13100	17300	12600	11700	12200
17	23800	15900	19300	22600	16700	20200	20900	14100	18600	12000	10100	11100
18	23100	16900	20700	22700	17400	20400	20800	15300	18100	11200	10000	10600
19	26000	18100	22800	23600	16900	20800	21500	13200	17800	11000	9880	10400
20	27200	21600	23900	23800	16400	20200	22000	14400	18400	10500	9390	10000
21	24000	17800	21500	23300	16100	19500	19300	12700	16200	10300	9460	9910
22	21900	14100	18400	22100	15000	17800	19300	10400	15000	10600	9630	10000
23	22400	13500	17500	21000	14000	16500	20400	12100	16800	10500	9120	9850
24	22100	12900	17100	21300	12500	16600	22000	13100	17300	10100	9060	9570
25	22200	13600	18000	22600	14000	17700	20500	14000	17800	10900	9390	9990
26	23000	13700	18300	21900	14200	18000	20400	14400	18000	12600	10100	11300
27	24300	13400	18700	21600	14300	18000	21400	14700	18100	13500	11900	12600
28	21600	12400	17600	21200	14000	18100	21900	14700	19100	13500	4080	11000
29	20400	11800	16200	21300	16000	18400	23800	18100	20500	5630	3790	5280
30	21500	10200	16600	20900	14500	17600	21600	15700	18600	7240	5210	5840
31	21900	13100	17500	---	---	---	19900	13200	17700	6700	5610	6110
MONTH	31100	10200	21600	23800	9360	17100	23800	10400	17700	27600	3790	14500

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6320	5630	6000	18900	14600	16500	22000	12700	19200			
2	8800	5890	6930	20500	11900	15800	21900	13600	18700			
3	7640	5640	6580	14400	13900	---	20300	11700	16400			
4	8960	5760	7200	---	---	---	19100	11800	15800			
5	7990	1140	5480	---	---	---	18700	11900	15700			
6	5850	2690	5190	---	---	---	---	---	---			
7	5830	4860	5350	---	---	---	---	---	---			
8	6040	1420	4790	---	---	---	---	---	---			
9	5000	1690	3590	---	---	---	---	---	---			
10	4790	2700	3690	---	---	---	---	---	---			
11	4440	2690	3710	---	---	---	---	---	---			
12	20300	4210	10400	---	---	---	---	---	---			
13	20500	14400	19600	---	---	---	---	---	---			
14	20500	17900	19300	---	---	---	---	---	---			
15	20500	17600	19000	---	---	---	---	---	---			
16	21400	18200	19500	---	---	---	---	---	---			
17	21500	13600	19400	---	---	---	---	---	---			
18	22400	16600	19400	---	---	---	---	---	---			
19	19900	14600	17500	---	---	---	---	---	---			
20	21900	14500	19200	---	---	---	---	---	---			
21	18900	16100	17700	---	---	---	---	---	---			
22	19600	11800	16100	---	---	---	---	---	---			
23	14000	6020	9570	---	---	---	---	---	---			
24	21900	11600	16700	---	---	---	---	---	---			
25	22600	9360	17200	---	---	---	---	---	---			
26	20000	12900	17200	---	---	---	---	---	---			
27	17300	12100	14800	---	---	---	---	---	---			
28	19100	12100	16100	20100	13500	16600	---	---	---			
29	---	---	---	23300	14300	19800	---	---	---			
30	---	---	---	22100	14400	18800	---	---	---			
31	---	---	---	22100	15800	19400						
MONTH	22600	1140	12400	23300	11900	17800	22000	11700	17200			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	27600	20900	24100	---	---	---	28700	24000	26400
2	---	---	---	27600	21300	24500	---	---	---	27400	21800	25300
3	---	---	---	28900	22000	25400	---	---	---	26900	21000	24700
4	---	---	---	---	---	---	---	---	---	28500	22000	25500
5	---	---	---	---	---	---	---	---	---	28700	21600	25800
6	---	---	---	---	---	---	---	---	---	28300	22500	25400
7	---	---	---	26700	21600	24900	---	---	---	---	---	---
8	---	---	---	26000	19500	23400	28300	22000	25700	---	---	---
9	---	---	---	23800	18400	21800	29000	21600	25700	---	---	---
10	---	---	---	23900	18600	21500	29000	22100	26200	---	---	---
11	---	---	---	25200	20000	22100	29000	22000	26700	---	---	---
12	---	---	---	25700	19700	22300	29400	24900	27100	---	---	---
13	---	---	---	23800	19800	22400	29600	24900	27500	---	---	---
14	---	---	---	25400	19600	22300	28900	25200	27400	---	---	---
15	---	---	---	25700	19700	22800	28300	25100	27000	---	---	---
16	---	---	---	24900	19500	22600	---	---	---	---	---	---
17	---	---	---	24000	18800	21500	---	---	---	---	---	---
18	---	---	---	23900	18600	21300	---	---	---	---	---	---
19	---	---	---	24200	19100	21600	---	---	---	---	---	---
20	---	---	---	24500	19200	21700	---	---	---	---	---	---
21	25400	20600	23900	24000	19400	21900	---	---	---	---	---	---
22	26200	21000	24300	25700	21000	23000	---	---	---	---	---	---
23	26900	22500	24700	29200	22700	25800	26000	15500	19300	---	---	---
24	27200	21800	25100	28700	21900	25500	28300	15600	23400	---	---	---
25	26000	22200	24600	27100	20900	23800	30900	22400	26800	---	---	---
26	27200	22600	25100	27600	23100	25300	30900	21900	27400	---	---	---
27	28300	21900	25500	---	---	---	29800	24600	27000	25900	22200	24600
28	27900	23100	25300	---	---	---	29000	23600	26300	26500	21400	24100
29	27600	21500	24500	---	---	---	28300	22800	25800	26400	18900	23500
30	28100	21800	24600	---	---	---	28700	23200	25800	27200	19100	23500
31	---	---	---	---	---	---	29000	23300	26300	---	---	---
MONTH	28300	20600	24800	29200	18400	23100	30900	15500	26000	28700	18900	24900

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.0	19.5	20.0	11.0	10.0	11.0	5.0	4.5	5.0	0.0	0.0	0.0
2	19.5	19.5	19.5	10.5	10.0	10.0	4.5	4.0	4.5	0.0	0.0	0.0
3	19.5	19.0	19.0	10.5	10.0	10.0	4.0	3.0	3.5	0.0	0.0	0.0
4	19.5	18.5	19.0	11.0	10.0	10.5	3.5	2.5	3.0	0.0	0.0	0.0
5	19.0	18.5	19.0	10.5	10.0	10.0	3.0	3.0	3.0	0.0	0.0	0.0
6	19.0	18.5	18.5	10.0	9.5	9.5	3.5	2.5	3.0	0.0	0.0	0.0
7	19.0	18.5	19.0	9.5	9.5	9.5	3.5	3.0	3.5	0.0	0.0	0.0
8	19.5	19.0	19.0	9.5	8.5	9.0	3.5	2.5	3.0	0.0	0.0	0.0
9	19.5	19.0	19.5	8.5	8.0	8.0	2.5	2.0	2.5	0.0	0.0	0.0
10	19.0	18.0	18.5	8.0	8.0	8.0	2.5	2.0	2.5	0.0	0.0	0.0
11	18.5	17.5	18.0	8.0	7.5	8.0	2.5	2.5	2.5	0.0	0.0	0.0
12	18.0	17.0	17.5	8.0	7.5	7.5	3.0	2.5	2.5	0.0	0.0	0.0
13	17.5	17.0	17.5	7.5	7.0	7.5	3.0	2.0	2.5	0.0	0.0	0.0
14	17.5	16.5	17.0	7.5	6.5	7.5	2.5	1.0	2.0	0.0	0.0	0.0
15	17.0	16.0	16.5	7.0	6.5	7.0	2.5	2.0	2.5	0.0	0.0	0.0
16	17.0	16.0	16.5	7.5	6.5	7.0	2.5	2.0	2.5	0.0	0.0	0.0
17	16.5	15.0	15.5	7.5	7.0	7.5	2.5	2.0	2.5	0.0	0.0	0.0
18	15.5	14.5	15.0	7.5	7.0	7.5	2.5	2.0	2.5	0.0	0.0	0.0
19	15.0	14.5	15.0	7.5	7.0	7.5	2.5	2.0	2.5	0.0	0.0	0.0
20	15.0	14.5	15.0	7.5	7.0	7.5	2.5	2.5	2.5	0.0	0.0	0.0
21	15.0	14.0	14.5	7.5	7.0	7.0	2.5	2.0	2.5	0.0	0.0	0.0
22	14.0	13.5	14.0	7.0	6.5	6.5	2.0	1.0	1.5	0.0	0.0	0.0
23	13.5	13.0	13.5	6.5	6.0	6.0	1.5	1.0	1.5	0.0	0.0	0.0
24	13.0	13.0	13.0	6.0	5.0	5.5	1.5	0.5	1.0	0.0	0.0	0.0
25	13.0	13.0	13.0	5.5	5.0	5.5	1.0	0.5	1.0	0.0	0.0	0.0
26	13.0	12.0	12.5	6.0	5.0	5.5	1.0	0.5	1.0	0.0	0.0	0.0
27	12.5	11.5	12.0	6.0	6.0	6.0	1.0	0.5	1.0	0.0	0.0	0.0
28	11.5	11.0	11.5	6.0	6.0	6.0	1.0	0.5	1.0	0.0	0.0	0.0
29	11.5	10.5	11.0	6.0	5.5	6.0	1.5	1.0	1.0	0.0	0.0	0.0
30	11.0	10.5	11.0	5.5	4.5	5.0	1.0	0.0	0.5	0.0	0.0	0.0
31	11.5	11.0	11.0	---	---	---	0.5	0.0	0.0	0.0	0.0	0.0
MONTH	20.0	10.5	16.0	11.0	4.5	7.5	5.0	0.0	2.5	0.0	0.0	0.0
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	---	---	---	10.0	8.5	9.0			
2	0.0	0.0	0.0	---	---	---	9.5	9.0	9.0			
3	0.0	0.0	0.0	---	---	---	10.5	9.0	10.0			
4	0.0	0.0	0.0	---	---	---	10.0	9.5	10.0			
5	0.0	0.0	0.0	---	---	---	10.0	9.5	10.0			
6	0.0	0.0	0.0	---	---	---	10.0	9.5	10.0			
7	0.0	0.0	0.0	---	---	---	10.0	9.5	9.5			
8	0.0	0.0	0.0	---	---	---	9.5	9.0	9.5			
9	0.0	0.0	0.0	---	---	---	9.5	8.5	9.0			
10	---	---	---	---	---	---	10.0	8.5	9.5			
11	---	---	---	---	---	---	10.5	9.5	10.0			
12	---	---	---	---	---	---	11.0	9.5	10.0			
13	---	---	---	---	---	---	---	---	---			
14	---	---	---	---	---	---	---	---	---			
15	---	---	---	---	---	---	---	---	---			
16	---	---	---	---	---	---	---	---	---			
17	---	---	---	---	---	---	---	---	---			
18	---	---	---	---	---	---	---	---	---			
19	---	---	---	---	---	---	---	---	---			
20	---	---	---	---	---	---	---	---	---			
21	---	---	---	---	---	---	---	---	---			
22	---	---	---	---	---	---	---	---	---			
23	---	---	---	---	---	---	---	---	---			
24	---	---	---	---	---	---	---	---	---			
25	---	---	---	---	---	---	---	---	---			
26	---	---	---	---	---	---	---	---	---			
27	---	---	---	---	---	---	---	---	---			
28	---	---	---	8.0	7.0	7.5	---	---	---			
29	---	---	---	9.0	7.0	7.5	---	---	---			
30	---	---	---	9.5	7.5	8.5	---	---	---			
31	---	---	---	9.5	8.0	8.5	---	---	---			
MONTH	0.0	0.0	0.0	9.5	7.0	8.0	11.0	8.5	9.5			

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	25.5	24.5	25.0	---	---	---	26.0	25.5	26.0
2	---	---	---	25.5	25.0	25.5	---	---	---	26.5	26.0	26.0
3	---	---	---	26.0	25.0	25.5	---	---	---	26.5	26.0	26.5
4	---	---	---	---	---	---	---	---	---	27.0	26.0	26.5
5	---	---	---	---	---	---	---	---	---	26.5	23.0	26.5
6	---	---	---	---	---	---	---	---	---	26.5	21.5	26.0
7	---	---	---	26.5	26.0	26.0	---	---	---	---	---	---
8	---	---	---	27.0	26.0	26.5	28.0	27.0	27.5	---	---	---
9	---	---	---	27.0	26.5	26.5	28.5	26.5	27.5	---	---	---
10	---	---	---	27.5	26.5	26.5	28.0	27.0	27.5	---	---	---
11	---	---	---	26.5	26.5	26.5	29.0	27.0	27.5	---	---	---
12	---	---	---	26.5	26.0	26.5	28.0	27.0	27.5	---	---	---
13	---	---	---	28.5	26.5	26.5	27.5	27.0	27.5	---	---	---
14	---	---	---	28.0	26.5	27.0	27.5	27.0	27.0	---	---	---
15	---	---	---	28.5	26.5	27.5	27.5	27.0	27.0	---	---	---
16	---	---	---	28.5	27.0	27.5	---	---	---	---	---	---
17	---	---	---	28.5	27.0	28.0	---	---	---	---	---	---
18	---	---	---	28.5	28.0	28.0	---	---	---	---	---	---
19	---	---	---	29.0	28.0	28.5	---	---	---	---	---	---
20	---	---	---	29.0	28.5	28.5	---	---	---	---	---	---
21	23.0	22.5	23.0	30.0	28.5	29.0	---	---	---	---	---	---
22	23.0	22.0	22.5	28.5	28.0	28.5	---	---	---	---	---	---
23	23.0	22.0	22.5	29.0	27.5	28.5	26.0	25.0	25.0	---	---	---
24	23.5	22.0	22.5	28.5	28.0	28.5	26.0	25.0	25.0	---	---	---
25	23.0	22.5	23.0	28.0	27.0	27.5	25.5	24.5	25.0	---	---	---
26	24.0	22.5	23.0	27.0	26.5	27.0	25.0	24.5	25.0	---	---	---
27	25.0	23.5	23.5	---	---	---	25.0	24.5	24.5	22.5	22.0	22.0
28	24.5	23.5	24.0	---	---	---	25.0	24.5	25.0	22.5	21.5	22.0
29	24.5	24.0	24.5	---	---	---	25.5	24.5	25.0	21.5	21.5	21.5
30	25.0	24.5	24.5	---	---	---	26.0	25.0	25.5	21.5	21.0	21.5
31	---	---	---	---	---	---	26.0	25.0	26.0	---	---	---
MONTH	25.0	22.0	23.5	30.0	24.5	27.0	29.0	24.5	26.0	27.0	21.0	24.5

01477800 SHELLPOT CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°45'39", long 75°31'10", New Castle County, Hydrologic Unit 02040205, on right bank 100 ft (30 m) east of intersection of 44th and Pine Streets in Clifton Park, 700 ft (213 m) downstream from bridge on North Market Street in Wilmington, 0.2 mi (0.3 km) downstream from Matson Run, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--7.46 mi² (19.32 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1945 to current year.

REVISED RECORDS.--WSP 1382: 1948(m).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 15.16 ft (4.621 m) above mean sea level.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--31 years (water years 1947-77), 9.51 ft³/s (0.269 m³/s), 17.31 in/yr (440 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,850 ft³/s (194 m³/s) Sept. 13, 1971, gage height, 11.91 ft (3.630 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of computation of flow over dam at gage height 6.52 ft (1.987 m); contracted-opening measurements at gage heights 6.52 ft (1.987 m), 7.87 ft (2.429 m), and 8.6 ft (2.62 m), from floodmarks; type V culvert measurement at 9.10 ft (2.774 m); and contracted opening measurement of peak flow; minimum daily, 0.09 ft³/s (0.003 m³/s) Oct. 2, 4, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1940, that of Sept. 13, 1971. Flood of Aug. 1, 1945, reached a stage of about 8.5 ft (2.59 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (15 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 24	1900	558	15.8	3.61	1.100
Mar. 22	1340	*1670	47.3	5.66	1.725
June 28	2025	614	17.4	3.71	1.131
Aug. 17	1535	979	27.7	4.35	1.326
Aug. 22	0355	752	21.3	3.93	1.198
Sept. 19	2250	900	25.5	4.16	1.268

Minimum daily discharge, 0.45 ft³/s (0.013 m³/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	4.0	1.3	1.0	.88	2.6	2.1	2.6	22	1.5	4.2	3.8
2	2.1	2.3	1.3	1.0	.95	2.3	72	2.4	15	1.3	1.5	2.4
3	16	2.0	1.1	1.1	.95	2.2	12	2.1	1.5	.98	13	1.9
4	1.6	2.0	1.1	1.4	1.0	20	34	3.1	1.1	.96	1.7	1.1
5	.89	1.7	1.2	1.3	1.0	10	103	6.2	.95	1.1	.81	1.2
6	2.4	1.5	1.2	1.2	.88	3.9	11	11	3.5	2.0	.65	12
7	1.3	1.4	49	1.4	.88	2.9	5.6	3.9	2.1	8.5	.93	4.0
8	.90	1.3	5.6	1.0	1.2	2.4	4.5	2.2	1.0	1.6	.99	1.1
9	27	1.3	2.4	1.1	1.5	2.1	3.5	2.0	41	1.3	4.6	1.8
10	2.7	1.4	2.1	26	9.2	2.0	3.1	1.8	9.8	1.1	15	2.9
11	1.1	1.4	2.0	6.7	19	1.9	2.9	1.7	2.0	.92	9.2	1.9
12	.86	1.4	2.1	2.8	15	1.9	2.7	1.5	1.4	1.8	10	1.6
13	.79	1.3	1.9	2.3	15	84	2.7	1.5	1.2	1.5	3.1	1.5
14	.65	1.3	1.5	1.7	5.6	21	2.5	1.3	1.5	.99	25	1.5
15	.61	1.4	1.5	2.0	3.6	5.5	2.2	1.1	3.3	.78	2.6	1.4
16	.57	1.3	1.6	1.6	2.5	3.7	2.1	1.1	1.3	.78	1.1	1.6
17	2.2	1.3	1.6	1.4	1.6	2.9	1.9	1.1	1.8	.74	60	3.2
18	1.6	1.3	1.7	1.3	1.5	31	2.1	1.2	2.4	1.3	4.0	1.2
19	.70	1.6	1.5	1.2	1.6	6.7	2.2	2.7	1.9	1.4	1.4	45
20	72	1.3	3.8	1.4	2.6	4.9	1.8	1.3	2.0	1.8	1.5	25
21	14	1.3	5.8	1.3	1.6	4.1	2.2	1.2	2.8	1.1	1.9	1.8
22	2.1	1.2	1.6	1.3	1.4	236	2.3	1.0	1.2	.67	58	1.2
23	1.4	1.1	1.6	1.2	1.7	16	2.0	1.0	1.4	.52	3.7	1.4
24	3.6	1.1	1.3	1.2	73	6.3	12	1.0	1.6	.45	7.5	2.2
25	7.9	1.1	1.3	1.5	21	4.5	7.5	1.1	2.9	4.7	4.2	19
26	32	1.1	2.3	1.4	5.5	3.6	32	1.0	22	2.9	1.5	3.1
27	2.9	1.1	1.9	1.2	4.3	3.1	8.4	.94	2.0	.72	1.2	2.4
28	2.0	1.1	1.5	1.2	4.3	3.3	8.5	.82	50	.55	1.1	2.9
29	1.8	7.7	1.5	1.0	---	3.1	10	.81	13	.51	1.1	1.3
30	2.2	2.2	1.3	.88	---	2.7	3.2	.79	2.0	1.4	1.5	.92
31	54	---	1.3	.81	---	2.4	---	.92	---	1.0	2.2	---
TOTAL	269.25	51.5	106.9	71.89	199.24	499.0	362.0	62.38	215.65	46.87	245.18	152.32
MEAN	8.69	1.72	3.45	2.32	7.12	16.1	12.1	2.01	7.19	1.51	7.91	5.08
MAX	72	7.7	49	26	73	236	103	11	50	8.5	60	45
MIN	.57	1.1	1.1	.81	.88	1.9	1.8	.79	.95	.45	.65	.92
CFSM	1.17	.23	.46	.31	.95	2.16	1.62	.27	.96	.20	1.06	.68
IN.	1.34	.26	.53	.36	.99	2.49	1.80	.31	1.08	.23	1.22	.76

CAL YR 1976 TOTAL 2239.97 MEAN 6.12 MAX 138 MIN .30 CFSM .82 IN 11.17
WTR YR 1977 TOTAL 2282.18 MEAN 6.25 MAX 236 MIN .45 CFSM .84 IN 11.38

01477800 SHELLPOT CREEK AT WILMINGTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	AIR TEMPER-ATURE (DEG C)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT							
04...	1320	1.7	150	6.9	22.0	16.0	9.0
26...	1155	16	138	6.9	9.0	11.0	--
NOV							
16...	1040	1.3	300	--	6.0	3.5	--
DEC							
06...	1310	1.2	311	7.4	7.0	1.0	5.4
29...	1225	1.5	560	7.5	1.0	1.0	6.0
JAN							
27...	1300	1.2	840	7.5	.5	.0	5.1
FEB							
15...	1020	3.5	380	7.5	3.0	1.0	14.2
MAR							
31...	1105	2.6	295	8.0	18.0	15.5	10.4
MAY							
18...	1010	1.4	465	7.8	26.5	18.5	8.7
JUN							
30...	0930	2.0	239	7.7	22.5	21.0	8.0
AUG							
09...	1050	2.7	308	7.1	27.0	24.5	7.6
SEP							
16...	1050	1.6	210	7.2	20.5	18.5	8.4

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE

LOCATION.--Lat 39°38'14", long 75°43'43", New Castle County, Hydrologic Unit 02040205, on right bank 60 ft (18 m) downstream from highway bridge, 0.5 mi (0.8 km) southeast of Coochs Bridge, 3.6 mi (5.8 km) upstream from Muddy Run, 3.3 mi (5.3 km) south of Newark, and 22.6 mi (36.4 km) upstream from mouth.

DRAINAGE AREA.--20.5 mi² (53.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 25.54 ft (7.78 m) above mean sea level. Prior to Sept. 14, 1944, nonrecording gage on upstream side of bridge at same datum. Sept. 14, 1944, to May 13, 1969, recording gage at site on left bank at downstream side of highway bridge at same datum. May 26, 1969, to Dec. 5, 1973, recording gage on left bank 82 ft (25 m) downstream from highway bridge at same datum.

REMARKS.--Water-discharge records good except those for January, which are fair. Low and medium flow regulated by mill above station.

AVERAGE DISCHARGE.--34 years, 27.1 ft³/s (0.767 m³/s), 17.95 in/yr (456 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft³/s (94.0 m³/s) June 22, 1972, gage height, 11.35 ft (3.459 m); maximum gage height, 12.41 ft (3.783 m) May 2, 1947; minimum daily discharge, 0.2 ft³/s (0.006 m³/s) Aug. 7, 14, 18, 21, 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)	Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)
Mar. 13	2230	1150	32.6	9.84	2.999	Mar. 22	1700	*1900	53.8	10.42	3.176

Minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	28	9.2	8.2	4.7	14	18	8.8	7.5	7.5	8.0	4.9
2	148	15	9.1	7.5	4.8	12	158	9.3	58	7.4	6.5	3.1
3	95	13	9.1	7.0	4.8	12	78	9.1	9.9	6.9	19	2.4
4	15	13	7.4	9.2	5.6	49	47	8.7	6.8	6.3	7.7	2.6
5	9.5	11	8.0	8.2	5.3	48	370	11	5.1	6.7	6.2	2.5
6	11	11	10	7.3	5.3	19	64	31	7.7	53	5.9	6.5
7	8.0	10	142	9.2	5.1	16	25	22	8.9	34	5.8	13
8	10	12	41	10	5.1	14	20	24	7.7	10	6.5	5.1
9	97	11	15	9.2	5.1	13	15	11	59	8.1	6.3	2.2
10	20	8.3	13	71	7.1	12	14	9.3	35	7.4	20	5.1
11	14	12	13	63	77	12	14	9.4	6.3	7.2	59	2.2
12	9.0	9.4	12	16	97	11	12	7.4	4.6	7.5	22	2.6
13	8.0	9.3	12	5.7	97	279	13	7.6	6.7	7.4	11	3.2
14	8.7	8.8	11	5.0	43	188	11	7.6	3.2	9.0	113	3.7
15	11	9.6	10	7.0	23	32	11	6.9	6.5	7.1	18	2.4
16	8.1	12	11	6.4	15	21	11	7.4	3.4	6.9	8.2	2.1
17	9.8	8.1	11	5.9	10	17	10	6.8	5.7	6.2	42	2.4
18	12	9.7	10	5.5	10	87	10	6.8	6.5	8.4	17	2.0
19	7.0	9.0	9.8	5.1	11	35	9.6	7.4	4.3	6.5	8.2	4.1
20	210	8.5	13	5.9	12	22	10	9.2	6.0	7.8	7.2	37
21	164	9.2	20	5.9	12	21	9.4	5.6	2.4	6.6	6.8	6.5
22	17	9.4	11	6.4	9.9	644	9.4	6.4	5.5	7.2	164	2.6
23	13	11	9.5	5.3	11	111	9.5	8.4	3.5	5.1	7.0	5.2
24	13	7.3	10	5.9	87	40	13	5.1	4.6	4.8	9.7	2.7
25	26	7.8	8.9	6.4	189	29	19	7.2	3.8	15	9.3	6.3
26	160	9.9	11	6.2	27	24	16	6.3	3.9	11	4.4	4.9
27	20	9.0	10	5.9	18	22	10	8.1	3.9	6.5	4.1	4.1
28	13	7.8	10	5.9	18	22	11	5.6	65	7.0	2.4	3.1
29	13	18	9.5	5.6	---	20	18	5.3	34	7.5	3.1	4.8
30	11	12	7.6	4.5	---	19	10	6.0	8.0	6.6	3.6	4.0
31	182	---	10	4.5	---	18	---	8.5	---	5.0	8.9	---
TOTAL	1388.1	330.1	494.1	334.8	819.8	1883	1045.9	293.2	393.4	303.6	620.8	153.3
MEAN	44.8	11.0	15.9	10.8	29.3	60.7	34.9	9.46	13.1	9.79	20.0	5.11
MAX	210	28	142	71	189	644	370	31	65	53	164	37
MIN	7.0	7.3	7.4	4.5	4.7	11	9.4	5.1	2.4	4.8	2.4	2.0
CFSM	2.19	.54	.78	.53	1.43	2.96	1.70	.46	.64	.48	.98	.25
IN.	2.52	.60	.90	.61	1.49	3.42	1.90	.53	.71	.55	1.13	.28

CAL YR 1976 TOTAL 9419.4 MEAN 25.7 MAX 522 MIN 3.3 CFSM 1.25 IN 17.09
WTR YR 1977 TOTAL 8060.1 MEAN 22.1 MAX 644 MIN 2.0 CFSM 1.08 IN 14.63

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT							
04...	1250	19	--	6.4	20.5	16.0	--
NOV							
11...	1330	17	177	6.8	9.5	5.0	5.0
DEC							
14...	1235	19	182	7.6	1.5	1.0	4.9
JAN							
13...	1405	3.4	330	6.9	-5.0	.0	4.8
FEB							
16...	1120	13	210	7.4	-3.0	.0	11.8
MAY							
19...	1250	7.3	153	7.6	24.0	21.0	8.6
JUN							
28...	1030	3.7	162	8.0	20.0	22.0	7.2
AUG							
11...	1440	19	327	7.0	32.5	25.5	7.8
SEP							
15...	0735	3.8	135	7.6	17.0	18.0	8.0

DELAWARE RIVER BASIN

01478500 WHITE CLAY CREEK ABOVE NEWARK, DE

LOCATION.--Lat 39°42'52", long 75°45'34", New Castle County, Hydrologic Unit 02040205, on right bank at downstream wingwall of abandoned bridge, 0.9 mi (1.4 km) downstream from small tributary, 1.7 mi (2.7 km) southeast of Delaware-Maryland-Pennsylvania State corner, 2.1 mi (3.4 km) downstream from Pennsylvania-Delaware State line, 2.2 mi (3.5 km) north of Newark, and 12.8 mi (20.6 km) upstream from mouth.

DRAINAGE AREA.--66.7 mi^2 (172.8 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1952 to September 1959, July 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 78.6 ft (24.0 m) above mean sea level.

REMARKS.--Water-discharge records fair. Records do not include a negligible diversion above station by plant of E. I. du Pont de Nemours & Co.

AVERAGE DISCHARGE.--22 years (water years 1953-59, 1963-77), 83.9 ft^3/s (2.376 m^3/s), 17.08 in/yr (434 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s (289 m^3/s) June 22, 1972, gage height, 13.77 ft (4.197 m), from rating curve extended above 1,800 ft^3/s (51.0 m^3/s) on basis of contracted-opening measurements at gage heights 9.97 ft (3.039 m) and 13.77 ft (4.197 m); minimum, 4.6 ft^3/s (0.13 m^3/s) Dec. 7, 1954, gage height, 0.55 ft (0.168 m), result of freezeup; minimum daily, 5.6 ft^3/s (0.16 m^3/s) Sept. 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	2230	1990	56.4	6.19	1.887	Apr. 5	0530	1560	44.2	5.39	1.643
Mar. 22	1630	*2590	73.3	7.19	2.192						

Minimum daily discharge, 21 ft^3/s (0.59 m^3/s) Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	86	48	39	28	60	70	63	59	43	28	54
2	90	65	48	45	28	55	201	63	159	39	28	29
3	120	60	44	45	30	52	146	61	46	36	30	26
4	70	60	44	45	35	87	101	61	40	35	35	24
5	50	56	43	43	30	110	695	72	39	35	28	24
6	47	54	43	40	27	70	176	118	43	71	26	41
7	40	53	218	43	25	60	120	102	45	92	27	42
8	45	52	94	40	25	55	107	72	39	47	25	27
9	200	51	73	45	30	53	96	64	68	40	27	25
10	80	51	62	60	35	52	92	61	144	38	49	26
11	58	49	57	150	250	51	88	59	48	36	89	24
12	42	49	57	54	400	50	85	58	39	38	38	22
13	41	48	55	38	300	287	81	56	36	42	36	22
14	39	48	48	40	160	270	79	54	34	43	49	21
15	37	48	54	42	100	88	74	53	38	33	41	21
16	37	48	51	38	70	71	73	53	35	32	35	22
17	38	47	50	36	50	61	71	52	34	31	51	25
18	40	47	49	30	40	106	70	52	44	32	63	25
19	36	46	47	34	45	83	70	52	34	30	35	32
20	198	48	50	36	50	67	68	51	32	30	32	133
21	294	46	61	34	50	66	67	49	32	31	30	29
22	73	45	45	32	43	782	66	47	30	27	85	26
23	61	44	54	30	60	224	65	46	29	25	43	25
24	58	43	49	30	323	123	68	45	28	26	44	24
25	73	44	43	35	320	102	104	46	29	29	66	42
26	133	44	50	35	82	92	85	45	31	45	37	31
27	70	45	42	33	70	86	74	42	28	29	33	28
28	60	45	44	30	72	84	69	41	48	27	32	32
29	57	60	46	27	---	83	81	40	291	27	30	25
30	56	54	40	27	---	78	67	39	51	29	29	23
31	242	---	45	28	---	74	---	41	---	30	65	---
TOTAL	2597	1536	1754	1284	2778	3582	3309	1758	1653	1148	1266	950
MEAN	83.8	51.2	56.6	41.4	99.2	116	110	56.7	55.1	37.0	40.8	31.7
MAX	294	86	218	150	400	782	695	118	291	92	89	133
MIN	36	43	40	27	25	50	65	39	28	25	25	21
CFSM	1.26	.77	.85	.62	1.49	1.74	1.65	.85	.83	.56	.61	.48
IN.	1.45	.86	.98	.72	1.55	2.00	1.85	.98	.92	.64	.71	.53

CAL YR 1976 TOTAL 31511 MEAN 86.1 MAX 956 MIN 25 CFSM 1.29 IN 17.57
WTR YR 1977 TOTAL 23615 MEAN 64.7 MAX 782 MIN 21 CFSM .97 IN 13.17

01478500 WHITE CLAY CREEK ABOVE NEWARK, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
OCT												
12...	1110	41	--	7.1	14.0	9.5	--	--	--	--	--	--
NOV												
04...	1100	59	245	7.5	--	9.0	11.6	87	34	21	8.3	6.7
11...	1130	49	251	7.3	8.0	4.0	6.1	--	--	--	--	--
JAN												
10...	1315	55	172	7.2	8.0	.0	--	--	--	--	--	--
MAR												
11...	1220	52	235	7.8	20.0	8.0	9.9	--	--	--	--	--
APR												
07...	1435	113	230	7.5	13.0	8.5	11.9	--	--	--	--	--
MAY												
19...	1135	50	205	8.6	22.5	20.5	10.4	--	--	--	--	--
JUN												
28...	1140	27	212	8.3	24.0	22.0	9.9	--	--	--	--	--
AUG												
11...	1040	75	419	7.2	27.0	23.5	7.8	--	--	--	--	--
SEP												
16...	1605	21	240	7.9	26.0	22.0	8.6	--	--	--	--	--

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	4.5	64	23	13	.1	16	141	124	3.1	.03	.04	.24
11...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
10...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
11...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
07...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
19...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
11...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
16...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	.28	.07	.05	1	<10	0	0	80	3	50	2	10
11...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
10...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
11...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
07...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
19...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
11...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
16...	--	--	--	--	--	--	--	--	--	--	--	--

BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1976 TO NOVEMBER 1976

DATE	NOV 4,76
TIME	1100
TOTAL COUNT	55
DIVERSITY: PHYLUM	0.3
.CLASS	0.3
..ORDER	1.4
...FAMILY	1.7
....GENUS	2.2
....GENUS-INSECTA	2.1

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..PLESIOPORA	
...TUBIFICIDAE	
....UNKNOWN GENUS	1
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..COLEOPTERA	
...ELMIDAE	
....OPTIOSERVUS	1
..DIPTERA	
...CHIRONOMIDAE	
....CARDIOCLADIUS	1
....MICROTENDIPES	1
....ORTHOCLADIUS	4
....RHEOTANYTARSUS	1
....THIENEMANNIELLA	1
...TIPULIDAE	
....ANTOCHA	9
..EPHEMEROPTERA	
...HEPTAGENIIDAE	
....STENONEMA	1
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	3
....HYDROPSYCHE	31
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	1

01479000 WHITE CLAY CREEK NEAR NEWARK, DE

LOCATION.--Lat 39°41'57", long 75°40'33", New Castle County, Hydrologic Unit 02040205, on left bank 35 ft (11 m) downstream from bridge on private road owned by Delaware Racing Association, 0.4 mi (0.6 km) downstream from the Baltimore and Ohio Railroad bridge, 1.1 mi (1.8 km) downstream from Pike Creek, 3.8 mi (6.1 km) east of Newark, and 5.0 mi (8.0 km) upstream from mouth. Prior to April 8, 1976, at site 0.5 mi (0.8 km) upstream.

DRAINAGE AREA.--89.1 mi^2 (230.8 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to September 1936, June 1943 to September 1957, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1051: 1933(M). WSP 1382: 1932, 1934.

GAGE.--Water-stage recorder. Datum of gage is 9.00 ft (2.74 m) above mean sea level. Nov. 17, 1931, to Sept. 30, 1936, June 4, 1943, to Sept. 30, 1957, and Oct. 1, 1959, to Apr. 7, 1976, at site 0.5 mi (0.8 km) upstream at datum 2.6 ft (0.792 m) higher.

REMARKS.--Water-discharge records good. Slight diurnal fluctuation at low flow caused by mills above station. Records do not include a negligible diversion above station by plant of E. I. du Pont de Nemours & Co.

AVERAGE DISCHARGE.--37 years (water years 1932-36, 1944-57, 1960-77), 111 ft^3/s (3.144 m^3/s), 16.92 in/yr (430 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft^3/s (257 m^3/s) June 22, 1972, gage height, 15.91 ft (4.849 m), present datum, from rating curve extended above 6,000 ft^3/s (170 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 4.7 ft^3/s (0.13 m^3/s) Sept. 11, 1966; minimum daily, 5.0 ft^3/s (0.14 m^3/s) Sept. 10, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 23 ft (7 m), previous site and datum, in July 1937 (probably affected by backwater from railroad bridge which has since been raised and widened), from information by Baltimore & Ohio Railroad.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 21	0115	2020	57.2	10.41	3.173
Feb. 24	0030	3340	94.6	11.84	3.609
Mar. 13	2100	2220	62.9	10.65	3.246
Mar. 22	1730	*4890	138	13.16	4.011
Apr. 5	0645	2830	80.1	11.33	3.453

Minimum daily discharge, 23 ft^3/s (0.65 m^3/s) Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	100	54	50	38	90	80	74	49	60	40	91
2	99	67	54	58	38	81	335	72	217	56	40	34
3	132	71	52	58	40	75	210	73	60	52	59	31
4	80	74	52	60	45	124	150	70	51	50	53	28
5	52	70	50	56	40	179	1250	75	49	51	44	27
6	48	63	50	54	35	108	232	109	52	53	40	38
7	40	58	370	56	33	88	145	141	56	156	37	61
8	41	55	149	54	33	82	128	79	55	66	37	31
9	237	55	108	60	36	79	113	68	123	56	36	31
10	93	55	82	100	45	80	107	66	210	54	68	31
11	50	55	77	250	300	78	103	64	70	52	165	28
12	43	54	77	70	500	77	98	62	56	50	66	25
13	42	53	75	50	400	555	93	60	51	51	50	25
14	40	53	72	52	200	539	91	58	49	55	109	24
15	38	53	70	54	120	136	89	55	54	49	64	23
16	37	53	69	50	90	99	88	54	52	48	53	23
17	38	53	69	45	64	84	87	54	50	45	67	28
18	42	54	68	40	56	163	85	53	62	45	82	29
19	39	54	66	45	60	125	84	52	50	45	51	48
20	296	54	72	47	66	91	79	53	46	44	42	224
21	581	55	86	45	66	90	78	52	44	45	40	39
22	79	54	60	43	56	1920	77	50	44	44	251	31
23	56	54	72	40	80	407	76	49	42	41	50	31
24	49	53	60	40	412	162	83	49	40	39	45	30
25	71	53	56	45	389	128	114	48	40	44	66	48
26	217	53	74	45	133	113	109	49	42	63	38	40
27	66	53	62	43	102	104	86	46	42	52	33	33
28	53	53	64	40	102	100	80	44	142	43	31	36
29	48	80	66	36	---	98	99	42	403	39	30	31
30	46	66	52	36	---	92	79	42	70	39	28	27
31	395	---	60	38	---	85	---	44	---	40	35	---
TOTAL	3280	1778	2448	1760	3579	6232	4528	1907	2371	1627	1850	1226
MEAN	106	59.3	79.0	56.8	128	201	151	61.5	79.0	52.5	59.7	40.9
MAX	581	100	370	250	500	1920	1250	141	403	156	251	224
MIN	37	53	50	36	33	75	76	42	40	39	28	23
CFSM	1.19	.67	.89	.64	1.44	2.26	1.70	.69	.89	.59	.67	.46
IN.	1.37	.74	1.02	.73	1.49	2.60	1.89	.80	.99	.68	.77	.51

CAL YR 1976 TOTAL 41335 MEAN 113 MAX 1250 MIN 32 CFSM 1.27 IN 17.26
WTR YR 1977 TOTAL 32586 MEAN 89.3 MAX 1920 MIN 23 CFSM 1.00 IN 13.60

01479000 WHITE CLAY CREEK NEAR NEWARK, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
OCT												
07...	1405	43	--	7.1	22.0	--	--	--	--	--	--	--
NOV												
04...	1000	74	240	7.5	--	9.0	11.4	82	35	20	7.8	7.3
15...	1430	55	245	--	10.5	5.0	--	--	--	--	--	--
DEC												
07...	1250	441	153	7.2	9.5	5.0	7.3	--	--	--	--	--
JAN												
18...	1310	39	257	7.1	-10.0	.0	--	--	--	--	--	--
MAY												
20...	1305	54	200	7.9	24.0	21.0	8.9	--	--	--	--	--
JUN												
29...	1120	630	98	7.5	23.0	22.0	8.0	--	--	--	--	--
AUG												
11...	1310	106	394	7.3	31.0	25.0	7.0	--	--	--	--	--
SEP												
15...	1150	23	220	7.9	21.0	19.5	7.2	--	--	--	--	--

DATE	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)
OCT												
07...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	5.1	57	26	13	.1	15	140	123	2.7	.03	.25	.45
15...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT												
07...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	.70	.09	.05	1	<10	0	0	80	5	120	5	330
15...	--	--	--	--	--	--	--	--	--	--	--	--

BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1976 TO NOVEMBER 1976

DATE	NOV 4,76
TIME	1000
TOTAL COUNT	19
DIVERSITY: PHYLUM	0.0
.CLASS	0.0
..ORDER	0.8
...FAMILY	1.3
....GENUS	2.3
....GENUS-INSECTA	2.3

ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CRICOTOPUS	4
....MICROTENDIPES	1
....ORTHOCLADIUS	7
...SIMULIIDAE	
....SIMULIUM	2
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	1
....HYDROPSYCHE	4

01480000 RED CLAY CREEK AT WOODDALE, DE

LOCATION.--Lat 39°45'52", long 75°38'08", New Castle County, Hydrologic Unit 02040205, on right bank 12 ft (4 m) upstream from bridge on State Highway 48, 0.3 mi (0.5 km) south of Wooddale, 2.3 mi (3.7 km) north of Marshallton, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--47.0 mi² (121.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to current year.

REVISED RECORDS.--WSP 1141: 1948. WSP 1272: 1951(m). WSP 1432: 1944(M), 1945, 1946(M), 1948, 1949(M). WSP 2102: 1960(M), 1964(M), 1966-67(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 81.46 ft (24.829 m) above mean sea level. Prior to Sept. 21, 1950, nonrecording gage at site 10 ft (3 m) downstream at same datum.

REMARKS.--Water-discharge records good except those for winter period, which are fair. Some diurnal fluctuation at low flow caused by mills above station.

AVERAGE DISCHARGE.--34 years, 63.7 ft³/s (1.804 m³/s), 18.41 in/yr (468 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,010 ft³/s (142 m³/s) July 21, 1975, gage height, 10.32 ft (3.146 m); minimum, 2.9 ft³/s (0.082 m³/s) Sept. 4, 1966; minimum daily, 4.5 ft³/s (0.13 m³/s) Sept. 4, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)	Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)
Feb. 11	2230	1300	36.8	5.01	1.527	Mar. 22	1600	*1710	48.4	5.58	1.701
Feb. 24	2330	1510	42.8	5.31	1.618						

Minimum discharge, 3.8 ft³/s (0.11 m³/s) July 30, gage height, 2.18 ft (0.664 m), result of regulation; minimum daily, 12 ft³/s (0.34 m³/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	57	26	19	16	40	48	46	40	29	16	111
2	30	41	27	20	16	37	154	45	99	26	16	30
3	65	38	25	20	17	35	114	45	33	23	17	23
4	36	37	25	25	20	71	74	43	27	22	18	21
5	27	34	24	25	20	83	445	51	27	23	15	21
6	26	32	24	20	17	50	146	71	32	23	13	26
7	24	31	162	22	15	43	94	71	34	38	14	61
8	24	30	67	22	15	39	82	45	27	27	12	21
9	111	29	37	21	17	37	70	41	71	23	19	19
10	46	29	35	120	20	36	67	40	127	22	24	19
11	27	29	34	90	250	35	64	38	40	21	42	16
12	24	28	34	30	340	34	64	38	31	27	21	14
13	23	28	32	20	200	187	59	36	29	23	20	15
14	21	28	28	21	70	175	58	34	28	22	37	15
15	20	27	29	22	40	68	55	33	33	17	25	14
16	20	28	30	19	31	54	54	33	29	18	19	14
17	20	27	30	17	25	46	53	33	27	17	36	19
18	22	27	27	17	24	90	51	35	38	17	39	18
19	20	26	26	18	25	65	51	33	27	17	19	21
20	106	26	28	20	27	50	51	34	24	19	16	91
21	168	25	38	20	22	49	50	32	25	16	15	25
22	44	25	26	19	20	485	49	29	22	14	56	21
23	35	25	27	18	24	170	48	30	22	13	22	20
24	33	25	23	17	200	88	50	30	22	15	23	21
25	46	25	24	17	240	70	71	30	22	13	34	51
26	89	26	22	19	57	63	86	30	40	31	19	29
27	43	26	21	18	47	59	56	27	24	16	17	24
28	36	25	23	17	49	58	52	26	74	14	16	31
29	33	38	22	19	---	57	65	25	204	17	15	22
30	31	33	21	17	---	55	49	25	37	14	15	19
31	165	---	19	16	---	51	---	27	---	16	60	---
TOTAL	1478	905	1016	785	1864	2480	2430	1156	1315	633	730	852
MEAN	47.7	30.2	32.8	25.3	66.6	80.0	81.0	37.3	43.8	20.4	23.5	28.4
MAX	168	57	162	120	340	485	445	71	204	38	60	111
MIN	20	25	19	16	15	34	48	25	22	13	12	14
CFSM	1.02	.64	.70	.54	1.42	1.70	1.72	.79	.93	.43	.50	.60
IN.	1.17	.72	.80	.62	1.48	1.96	1.92	.91	1.04	.50	.58	.67

CAL YR 1976 TOTAL 19707 MEAN 53.8 MAX 591 MIN 16 CFSM 1.15 IN 15.60
WTR YR 1977 TOTAL 15644 MEAN 42.9 MAX 485 MIN 12 CFSM .91 IN 12.38

01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: April 1953 to current year.

INSTRUMENTATION.--Temperature recorder since April 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 30.5°C July 17, Aug. 2, 6, 1955, July 19, 1963; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 28.5°C July 19; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT 12...	1230	25	--	--	15.0	11.5	--
NOV 16...	1400	26	400	--	8.0	4.5	--
DEC 09...	1100	34	287	7.3	-.5	.0	6.8
FEB 15...	1520	39	260	7.3	5.0	4.0	11.2
MAY 25...	1215	32	343	8.7	29.0	24.0	11.3
JUN 30...	1400	35	233	7.7	28.5	22.5	7.3
AUG 09...	1240	26	455	7.5	26.5	25.5	9.2
SEP 16...	1340	15	247	7.8	23.0	18.5	7.4

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.5	15.0	10.5	9.0	1.0	0.5	0.0	0.0	0.0	0.0	6.5	4.5
2	15.5	15.0	9.0	7.0	1.5	0.5	0.0	0.0	0.0	0.0	6.0	4.0
3	16.0	15.0	8.5	7.5	1.0	0.0	0.0	0.0	0.0	0.0	6.5	4.0
4	16.5	15.5	10.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0	8.0	6.0
5	16.0	16.0	9.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	9.0	7.0
6	17.0	16.0	8.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	9.0	8.0
7	18.0	16.5	8.5	7.5	3.5	0.0	0.0	0.0	0.0	0.0	8.0	6.5
8	18.5	17.5	8.5	6.5	3.5	1.0	0.0	0.0	0.0	0.0	8.5	6.0
9	19.0	18.0	6.5	5.5	1.0	0.0	0.0	0.0	0.0	0.0	9.0	6.5
10	18.0	14.0	7.0	5.5	2.0	0.5	0.0	0.0	0.0	0.0	10.5	8.0
11	14.0	12.5	6.5	6.0	3.0	2.0	0.0	0.0	0.0	0.0	12.0	9.0
12	13.0	11.0	7.0	6.0	4.0	3.0	0.0	0.0	0.0	0.0	11.5	10.0
13	13.0	11.0	6.0	5.0	4.0	1.5	0.0	0.0	0.0	0.0	11.5	11.0
14	14.0	12.5	5.5	4.5	1.5	0.5	0.0	0.0	0.0	0.0	11.0	9.5
15	13.5	11.5	5.5	5.0	1.0	0.5	0.0	0.0	2.5	0.0	12.0	9.5
16	14.5	13.0	5.5	4.5	2.0	1.0	0.0	0.0	2.0	1.0	12.0	10.0
17	13.5	11.5	5.5	3.5	3.0	2.0	0.5	0.0	1.0	0.5	11.0	9.0
18	11.5	10.0	5.5	4.5	3.0	2.5	0.5	0.0	0.5	0.5	10.0	8.0
19	10.0	8.5	5.5	4.0	2.5	2.0	0.0	0.0	2.5	0.5	8.5	6.5
20	12.5	9.5	5.5	5.0	3.5	2.0	0.0	0.0	2.5	2.5	7.5	7.0
21	13.0	12.0	5.0	4.0	3.5	0.5	0.0	0.0	2.5	1.5	9.0	6.5
22	12.0	10.0	4.5	3.5	0.5	0.0	0.0	0.0	2.5	0.5	9.0	7.5
23	10.0	9.0	3.5	3.0	0.0	0.0	0.0	0.0	5.0	2.0	8.0	6.0
24	10.0	9.5	3.0	2.5	0.0	0.0	0.0	0.0	5.5	3.5	8.0	6.5
25	11.5	10.0	3.5	2.5	0.0	0.0	0.0	0.0	4.5	3.0	7.5	5.0
26	12.0	11.0	4.0	2.5	0.0	0.0	0.0	0.0	6.0	4.0	8.5	5.5
27	11.0	9.0	5.5	3.5	0.0	0.0	0.0	0.0	8.0	5.5	10.0	7.0
28	9.0	7.5	6.5	5.5	0.0	0.0	0.0	0.0	8.0	6.0	10.0	9.5
29	7.5	6.5	6.5	4.5	0.0	0.0	0.0	0.0	---	---	14.0	9.5
30	8.0	7.0	4.5	1.0	0.0	0.0	0.0	0.0	---	---	17.5	14.0
31	10.5	8.0	---	---	0.0	0.0	0.0	0.0	---	---	17.5	14.5
MONTH	19.0	6.5	10.5	1.0	4.0	0.0	0.5	0.0	8.0	0.0	17.5	4.0

01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.5	12.5	15.5	12.5	18.0	17.0	23.0	22.0	24.0	22.5	24.0	23.0
2	13.0	10.0	15.5	14.5	19.5	17.5	24.0	21.5	25.5	22.0	25.5	23.5
3	14.0	10.0	14.5	15.5	20.5	18.5	23.0	20.0	23.5	22.0	26.5	24.5
4	14.0	10.5	17.5	14.5	20.0	16.5	22.0	20.0	26.0	23.0	25.5	23.5
5	10.5	8.5	16.5	14.0	19.0	17.5	23.5	21.0	27.0	23.5	24.5	23.5
6	9.5	8.5	19.0	16.5	18.0	16.0	25.0	22.5	27.5	24.5	24.5	23.0
7	10.5	7.5	19.0	18.0	16.5	15.5	23.5	22.5	27.5	25.0	24.0	22.5
8	10.5	9.0	18.0	15.0	17.0	14.5	24.5	23.0	27.5	25.0	22.5	21.0
9	9.0	6.5	17.0	12.0	16.5	16.0	24.0	23.0	26.5	25.0	21.5	20.0
10	9.5	6.0	13.5	11.5	16.0	15.0	24.5	22.5	26.0	24.5	23.0	20.5
11	13.0	8.5	15.0	12.0	17.0	14.5	23.5	22.5	26.5	25.0	22.0	19.0
12	16.0	11.0	16.5	13.5	18.5	16.0	24.5	22.5	25.5	25.0	20.0	17.0
13	17.0	14.0	19.5	16.0	20.0	18.5	26.5	23.5	25.0	24.5	20.5	18.0
14	17.5	15.0	19.5	17.5	20.5	19.0	27.0	23.5	24.5	24.0	21.0	20.0
15	16.0	13.0	18.5	16.0	20.0	19.5	27.0	23.0	24.5	23.5	20.0	18.5
16	15.0	12.0	17.5	15.0	22.0	19.0	27.0	23.0	25.0	23.0	19.0	18.5
17	15.0	12.0	19.5	16.0	22.0	20.5	28.0	24.5	25.0	24.0	21.5	19.0
18	15.5	12.0	21.0	19.0	23.5	21.0	28.0	25.0	24.0	22.0	22.0	20.0
19	16.0	14.0	20.5	19.0	24.5	22.0	28.5	24.5	22.0	20.0	23.0	20.5
20	16.5	14.5	21.0	19.0	23.5	22.0	27.0	25.5	22.5	20.0	22.0	21.5
21	17.0	14.0	22.0	19.5	22.0	20.5	28.0	25.0	21.5	19.0	21.5	20.5
22	19.0	16.0	22.0	19.5	22.0	19.0	27.0	24.0	22.0	20.5	20.5	19.0
23	21.0	18.5	21.0	19.5	22.0	19.0	25.0	21.5	22.5	20.5	19.0	18.0
24	20.5	17.0	21.5	19.5	22.0	19.5	25.0	21.0	22.0	21.0	19.0	18.5
25	17.0	15.5	21.0	20.5	21.0	20.5	23.5	22.5	22.0	20.0	19.0	17.5
26	16.0	14.5	22.0	19.5	23.0	20.5	23.5	21.5	21.5	18.5	18.0	17.5
27	14.5	12.5	22.0	19.0	24.0	20.5	23.5	20.0	22.5	19.5	18.5	17.5
28	14.0	12.5	22.5	18.5	23.0	21.5	22.5	19.0	24.5	21.0	19.0	18.0
29	13.5	11.5	21.5	20.0	23.0	21.0	23.5	19.5	25.5	23.0	18.5	16.5
30	14.5	11.0	20.0	18.0	23.0	21.5	22.5	21.0	26.0	23.5	18.0	16.0
31	---	---	18.0	17.0	---	---	24.5	21.0	26.0	23.5	---	---
MONTH	21.0	6.0	22.5	11.5	24.5	14.5	28.5	19.0	27.5	18.5	26.5	16.0

01480100 LITTLE MILL CREEK AT ELSMERE, DE

LOCATION.--Lat 39°44'05", long 75°35'14", New Castle County, Hydrologic Unit 02040205, on left bank at downstream side of bridge on North Du Pont Road at Elsmere, 0.5 mi (0.8 km) downstream from unnamed tributary, and 2.2 mi (3.5 km) upstream from mouth.

DRAINAGE AREA.--6.70 mi² (17.35 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1968. Prior to Mar. 19, 1964, nonrecording gage at same site and datum. Datum of gage is 48.62 ft (14.819 m) above mean sea level.

REMARKS.--Water-discharge records good except those for winter period and for period of no gage-height record, May 23 to Aug. 10, which are poor.

AVERAGE DISCHARGE.--14 years, 9.77 ft³/s (0.277 m³/s), 19.80 in/yr (503 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft³/s (112 m³/s) Aug. 10, 1967, gage height, 8.58 ft (2.615 m), from rating curve extended above 380 ft³/s (10.8 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.10 ft³/s (0.003 m³/s) July 17, 18, Sept. 18, 19, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.9 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 13	2030	414	11.7	4.02	1.225
Mar. 22	1300	*928	26.3	5.36	1.634
Apr. 2	1515	355	10.1	3.85	1.173
Aug. 22	0215	583	16.5	4.49	1.369
Sept. 19	2245	394	11.2	3.96	1.207

Minimum discharge, 0.14 ft³/s (0.004 m³/s) Sept. 13, 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	4.6	1.9	1.6	1.3	3.4	3.7	3.2	20	1.3	4.0	.64
2	2.8	2.9	1.7	1.4	1.5	3.0	73	3.2	15	1.2	1.4	.58
3	10	2.7	1.7	1.4	2.4	2.8	14	3.1	3.0	1.1	13	.38
4	1.5	2.6	1.6	1.5	2.5	16	27	3.9	2.0	1.0	2.0	.24
5	1.1	2.2	1.6	1.4	2.2	8.2	92	8.5	2.0	1.2	.90	.26
6	1.7	2.0	1.7	1.4	1.4	4.2	14	9.5	2.3	2.0	.70	2.7
7	1.2	1.9	46	1.8	1.5	3.6	8.1	4.7	2.5	9.0	.90	1.7
8	1.2	2.0	6.2	1.5	1.8	3.4	6.7	3.2	2.0	1.8	.80	.51
9	23	2.1	3.5	1.4	2.4	3.0	5.7	3.0	30	1.4	1.3	1.5
10	2.4	2.0	2.9	35	8.0	2.8	5.2	2.9	10	1.1	20	1.2
11	1.4	2.2	2.7	7.0	26	2.7	5.3	2.9	3.0	1.0	8.5	.30
12	1.4	2.3	2.8	4.0	18	2.6	4.9	2.8	2.3	1.8	15	.25
13	1.8	2.2	2.4	3.2	15	79	4.5	2.7	2.1	1.4	5.3	.22
14	1.2	2.1	2.3	2.3	7.2	23	4.3	2.4	2.0	1.3	23	.45
15	1.2	1.8	2.5	3.0	4.8	6.4	4.0	2.3	4.0	.80	2.9	.24
16	1.1	1.9	2.6	2.5	2.9	4.7	3.7	2.6	1.9	.80	1.4	.23
17	2.5	1.9	2.5	2.2	2.4	3.9	3.5	2.4	1.8	.80	26	.88
18	1.6	1.9	2.2	2.0	2.4	29	3.6	2.6	2.9	1.4	3.5	.32
19	1.1	1.9	2.1	1.9	2.3	7.3	3.6	2.4	1.8	1.5	1.4	23
20	60	1.8	5.0	2.2	3.6	5.9	3.4	2.3	1.6	1.8	1.1	25
21	12	1.7	4.9	1.8	3.1	4.9	3.5	2.1	1.7	.80	.86	1.3
22	2.1	1.8	2.6	1.7	2.8	185	3.6	2.0	1.5	.70	56	.90
23	1.6	1.8	2.3	1.7	3.0	17	3.4	2.0	1.6	.60	2.8	1.2
24	4.1	1.8	2.1	1.7	46	7.0	12	2.0	1.8	.50	4.9	1.5
25	7.4	1.8	2.0	2.5	19	4.8	7.3	2.1	4.0	4.0	2.0	4.9
26	28	1.7	3.4	2.2	5.0	3.9	15	2.0	20	3.0	.92	1.5
27	3.5	1.8	2.5	1.9	4.1	3.5	5.0	1.9	2.0	.80	.75	1.1
28	4.1	1.7	2.4	1.9	4.2	3.8	7.2	1.8	5.0	.70	.66	1.1
29	3.3	7.4	2.1	1.5	---	3.8	7.4	1.7	40	.60	.67	.68
30	2.5	2.8	2.0	1.3	---	3.7	3.4	1.7	2.0	1.5	.55	.70
31	49	---	1.9	1.2	---	3.7	---	1.9	---	1.1	.54	---
TOTAL	248.8	69.3	124.1	98.1	196.8	456.0	358.0	91.8	191.8	48.00	203.75	75.48
MEAN	8.03	2.31	4.00	3.16	7.03	14.7	11.9	2.96	6.39	1.55	6.57	2.52
MAX	60	7.4	46	35	46	185	92	9.5	40	9.0	56	25
MIN	1.1	1.7	1.6	1.2	1.3	2.6	3.4	1.7	1.5	.50	.54	.22
CFSM	1.20	.35	.60	.47	1.05	2.19	1.78	.44	.95	.23	.98	.38
IN.	1.38	.38	.69	.54	1.09	2.53	1.99	.51	1.06	.27	1.13	.42

CAL YR 1976 TOTAL 2531.80 MEAN 6.92 MAX 122 MIN 1.1 CFSM 1.03 IN 14.06
WTR YR 1977 TOTAL 2161.93 MEAN 5.92 MAX 185 MIN .22 CFSM .88 IN 12.00

01480100 LITTLE MILL CREEK AT ELSMERE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT 12...	1345	1.3	--	6.9	14.5	14.0	--
DEC 09...	1405	3.6	265	7.3	1.5	1.0	6.6
JAN 20...	1400	4.2	310	6.7	-.5	.0	5.1
FEB 15...	1220	4.4	300	7.3	5.0	3.0	12.0
MAR 31...	1400	4.0	215	7.9	16.5	19.0	--
MAY 18...	1130	2.1	200	9.1	31.0	25.0	16.0
JUN 30...	1135	1.4	179	8.1	28.0	25.0	10.0
AUG 09...	1410	1.0	338	7.0	33.5	31.0	14.0
10...	1355	9.2	273	7.2	27.0	27.5	--
SEP 15...	1410	.34	220	8.4	22.0	19.0	--

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA

LOCATION.--Lat 39°52'11", long 75°35'37", Delaware County, Hydrologic Unit 02040205, on left bank 27 ft (8 m) upstream from Penn Central Railroad bridge at Chadds Ford, 150 ft (46 m) upstream from Harvey Run and 1,200 ft (370 m) downstream from highway bridge on U.S. Highway 1.

DRAINAGE AREA.--287 mi^2 (743 km^2), including that of Harvey Run.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to December 1953, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1202: 1919-20, 1932-33, 1936, 1938(P), 1942, (maximum only, 1917-18, 1922-31, 1934, 1939, 1944-46). WDR PA-72: 1971.

GAGE.--Water-stage recorder. Datum of gage is 150.45 ft (45.857 m) above mean sea level. Prior to May 21, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except those for December through February, which are fair. Flow regulated by Marsh Creek Reservoir about 17 mi (27 km) upstream.

AVERAGE DISCHARGE.--57 years (water years 1912-53, 1963-77), 388 ft^3/s (11.0 m^3/s), 18.38 in/yr (467 mm/yr), adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft^3/s (674 m^3/s) June 22, 1972, gage height, 16.56 ft (5.047 m), from rating curve extended above 9,000 ft^3/s (255 m^3/s) on basis of area-velocity study; minimum, 4.9 ft^3/s (0.14 m^3/s) Oct. 2, 1941, gage height, 0.28 ft (0.085 m); minimum daily, 42 ft^3/s (1.19 m^3/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,240 ft^3/s (148 m^3/s) Mar. 23, gage height, 8.82 ft (2.688 m); minimum, 94 ft^3/s (2.66 m^3/s) Aug. 1, gage height, 1.35 ft (0.411 m); minimum daily, 103 ft^3/s (2.92 m^3/s) July 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	332	593	201	186	150	342	394	337	217	206	110	781
2	245	400	206	183	150	312	620	329	523	188	193	263
3	676	350	188	182	160	284	840	333	219	172	197	236
4	458	320	185	184	180	386	461	317	184	164	223	193
5	263	290	180	188	160	783	3310	378	180	164	144	168
6	236	275	180	184	150	420	1290	398	193	164	168	180
7	223	265	966	184	150	354	764	363	223	272	267	197
8	210	250	646	193	150	324	671	315	184	210	144	147
9	1210	240	318	193	170	349	631	306	259	176	129	140
10	754	235	281	450	200	336	587	295	454	168	129	140
11	356	225	263	607	300	305	557	281	245	160	323	129
12	281	220	267	337	700	255	533	272	206	168	184	117
13	254	215	259	245	900	898	509	259	188	164	172	114
14	236	210	219	227	800	1640	521	256	188	147	201	110
15	219	205	227	227	600	552	478	250	223	140	227	110
16	214	202	232	214	484	490	430	246	197	132	164	106
17	206	200	223	201	358	430	443	245	180	132	206	164
18	201	195	214	195	277	484	424	241	197	125	267	151
19	197	192	210	180	249	452	405	268	176	129	160	129
20	210	190	210	180	256	370	356	246	180	125	140	454
21	1720	190	281	180	232	381	341	236	193	125	129	219
22	567	188	197	170	207	1640	343	224	160	114	501	176
23	400	188	219	170	236	2330	337	213	160	103	210	168
24	300	193	201	170	696	734	343	215	151	103	184	172
25	390	201	241	190	1890	585	520	207	144	121	214	446
26	599	201	219	190	506	532	483	209	332	184	160	304
27	350	206	236	180	402	492	457	195	201	129	140	236
28	300	201	206	170	404	472	369	191	454	110	132	290
29	270	254	201	160	---	466	414	183	1500	110	129	214
30	260	259	195	150	---	440	358	182	263	106	121	176
31	795	---	190	150	---	422	---	185	---	114	272	---
TOTAL	12932	7353	8061	6620	11117	18260	18189	8175	8174	4625	5940	6430
MEAN	417	245	260	214	397	589	606	264	272	149	192	214
MAX	1720	593	966	607	1890	2330	3310	398	1500	272	501	781
MIN	197	188	180	150	150	255	337	182	144	103	110	106
MEAN≠	422	242	259	213	404	583	608	260	273	147	196	214
CFSM≠	1.47	.84	.90	.14	1.41	2.03	2.12	.91	.95	.51	.68	.75
IN.≠	1.70	.94	1.04	.85	1.47	2.34	2.36	1.05	1.06	.59	.78	.84

CAL YR 1976 TOTAL 139442 MEAN 381 MAX 3360 MIN 114 MEAN≠ 383 CFSM≠ 1.33 IN.≠ 18.15
WTR YR 1977 TOTAL 115876 MEAN 317 MAX 3310 MIN 103 MEAN≠ 318 CFSM≠ 1.11 IN.≠ 15.03

≠ Adjusted for change in contents in Marsh Creek Reservoir.

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1965 to current year.
pH: October 1965 to September 1966, December 1971 to current year.
WATER TEMPERATURES: October 1964 to current year.
DISSOLVED OXYGEN: October 1971 to current year.
SUSPENDED SEDIMENT DISCHARGE: July 1963 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 445 micromhos Oct. 25, 1971; minimum, 71 micromhos June 23, 1972.
pH: Maximum, 9.8 Apr. 9, 1975; minimum, 6.1 Feb. 22, 1976.
WATER TEMPERATURES: Maximum, 31.0°C July 18, 19, 1977; minimum daily, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 17.1 mg/L Dec. 5, 1977; minimum, 4.7 mg/L July 10, 1975.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,000 mg/L (estimated) Feb. 8, 1965; minimum daily mean, 1 mg/L on many days.
SEDIMENT DISCHARGES: Maximum daily, 20,000 tons (18,100 tonnes) (estimated) Feb. 8, 1965; minimum daily, 0 tons (0 tonnes) Oct. 7, 8, 1967.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 420 micromhos Jan. 11; minimum, 100 micromhos June 29.
pH: Maximum, 9.0 April 21-23, May 1; minimum, 6.6 June 29.
WATER TEMPERATURES: Maximum 31.0°C July 18, 19; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 17.1 mg/L Dec. 5; minimum, 5.2 mg/L June 29.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,280 mg/L Feb. 25; minimum daily mean, 1 mg/L Oct. 30, Nov. 7-11, 18, 19.
SEDIMENT DISCHARGES: Maximum daily, 9,330 tons (8,460 tonnes) Feb. 25; minimum daily, 0.52 tons (0.47 tonnes) Nov. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT										
01...	0930	400	266	7.4	14.0	9.8	200	--	--	--
08...	1300	219	277	7.4	18.0	9.2	10	--	--	--
15...	1000	250	274	7.5	11.5	10.2	133	--	--	--
19...	1345	198	270	7.7	9.5	11.6	420	82	31	20
21...	1530	264	173	6.9	11.3	10.4	600	--	--	--
29...	0900	585	261	7.4	5.5	12.6	300	--	--	--
NOV										
15...	1130	205	273	7.6	4.0	13.9	85	--	--	--
24...	0900	224	259	7.7	1.5	14.3	250	--	--	--
29...	1500	309	253	7.7	7.5	11.9	240	--	--	--
DEC										
09...	1400	351	196	7.4	.5	14.4	340	--	--	--
15...	1430	236	222	7.6	.5	15.6	--	--	--	--
22...	1530	259	219	7.5	1.5	13.6	500	--	--	--
28...	1400	224	258	7.5	.5	15.1	--	--	--	--
JAN										
05...	0930	182	230	7.5	.0	13.6	811	--	--	--
13...	0915	230	279	7.3	.5	14.0	164	--	--	--
19...	1130	143	258	7.2	.0	13.4	550	--	--	--
24...	1130	237	254	7.3	.5	12.8	80	--	--	--
FEB										
01...	0900	224	256	7.3	.5	12.4	330	--	--	--
09...	1130	206	250	7.4	.5	13.6	77	--	--	--
16...	0845	645	204	7.5	.5	12.8	--	--	--	--
24...	1000	300	230	7.4	4.5	11.8	490	--	--	--
MAR										
02...	1000	309	212	7.4	5.0	12.1	440	--	--	--
15...	1230	550	190	7.1	10.5	10.0	733	--	--	--
24...	1445	725	188	7.3	7.5	11.5	1000	--	--	--
31...	1130	420	201	7.5	16.5	9.6	--	--	--	--
APR										
06...	1045	1320	156	7.1	8.5	10.8	440	--	--	--
14...	1355	540	189	8.4	17.0	11.3	480	--	--	--
20...	1345	352	205	8.4	16.5	11.8	--	--	--	--
29...	0945	420	200	7.4	12.5	9.6	330	--	--	--
MAY										
02...	1000	333	205	7.9	16.0	9.5	220	--	--	--
12...	1245	268	215	7.6	15.5	10.0	--	--	--	--
25...	0930	206	228	7.2	22.5	6.9	220	--	--	--
31...	1240	193	224	6.9	19.0	8.0	290	--	--	--

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
OCT										
01...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
19...	7.7	11	3.0	62	51	2.0	23	17	.1	13
21...	--	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)
OCT									
01...	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
19...	136	126	2.4	.18	.42	.60	.26	.14	1
21...	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT									
01...	--	--	--	--	--	--	--	--	28
08...	--	--	--	--	--	--	--	--	4.7
15...	--	--	--	--	--	--	--	--	2.8
19...	<10	2	0	80	93	30	7	10	--
21...	--	--	--	--	--	--	--	--	12
29...	--	--	--	--	--	--	--	--	5.2
NOV									
15...	--	--	--	--	--	--	--	--	3.8
24...	--	--	--	--	--	--	--	--	4.0
29...	--	--	--	--	--	--	--	--	3.4
DEC									
09...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	3.0
22...	--	--	--	--	--	--	--	--	22
28...	--	--	--	--	--	--	--	--	--
JAN									
05...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	4.5
19...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	3.2
FEB									
01...	--	--	--	--	--	--	--	--	2.4
09...	--	--	--	--	--	--	--	--	8.1
16...	--	--	--	--	--	--	--	--	3.0
24...	--	--	--	--	--	--	--	--	4.0
MAR									
02...	--	--	--	--	--	--	--	--	8.3
15...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	4.1
APR									
06...	--	--	--	--	--	--	--	--	3.7
14...	--	--	--	--	--	--	--	--	5.6
20...	--	--	--	--	--	--	--	--	1.9
29...	--	--	--	--	--	--	--	--	7.9
MAY									
02...	--	--	--	--	--	--	--	--	4.8
12...	--	--	--	--	--	--	--	--	5.7
25...	--	--	--	--	--	--	--	--	4.0
31...	--	--	--	--	--	--	--	--	7.0

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
JUN								
10...	1200	500	195	7.2	17.0	7.6	--	6.3
16...	1240	210	230	7.3	22.0	8.0	210	5.6
21...	1330	185	229	7.6	23.5	8.5	--	5.9
30...	1415	275	197	7.0	24.5	7.1	--	6.0
JUL								
07...	0930	328	245	7.2	24.5	6.4	73	8.4
14...	1130	164	249	7.6	27.0	8.0	--	5.1
22...	1030	111	259	7.4	27.5	6.6	106	4.7
28...	1400	111	244	7.6	24.0	8.7	220	5.2
AUG								
03...	1030	148	243	7.1	24.0	6.4	300	4.7
11...	1315	361	240	7.1	26.0	6.5	4000	6.1
17...	1100	156	241	7.2	25.2	6.6	8600	7.1
25...	1130	241	208	7.3	21.0	7.8	4100	6.5
31...	1015	114	227	7.6	26.0	7.7	E400	6.8
SEP								
07...	1430	198	166	7.0	24.0	6.8	7200	7.8
13...	1130	111	253	7.5	20.0	8.8	--	10
21...	1400	215	183	7.2	22.0	7.9	4000	11
29...	0930	215	223	7.2	17.5	8.2	310	15

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	269	196	250	224	191	205	256	243	250	250	231	235
2	256	247	253	248	224	240	269	256	262	254	243	248
3	277	188	241	254	246	249	271	248	264	247	233	237
4	225	190	214	256	248	251	283	245	268	235	225	228
5	249	225	239	255	249	252	280	242	270	233	223	229
6	262	247	256	258	251	253	284	230	267	237	229	234
7	273	259	267	260	253	257	260	178	230	240	230	236
8	284	263	274	260	250	255	215	180	198	234	226	229
9	280	169	234	258	248	254	232	196	215	270	235	252
10	215	173	189	261	254	258	217	208	212	316	235	255
11	243	212	231	263	253	258	213	208	211	420	321	373
12	257	241	250	267	253	260	214	209	212	356	277	296
13	263	253	259	267	256	260	218	210	213	285	257	272
14	268	259	264	273	258	268	217	209	213	263	245	255
15	280	263	272	275	258	266	226	214	220	245	230	236
16	278	268	273	260	253	256	224	217	221	255	230	244
17	276	265	272	262	256	258	223	217	220	305	255	284
18	280	265	271	263	254	259	220	215	217	270	250	258
19	276	265	271	268	255	262	222	216	219	261	251	257
20	276	268	271	263	253	258	230	218	224	252	245	248
21	189	174	185	262	254	258	228	216	220	245	238	241
22	231	189	211	267	258	263	253	214	231	247	236	243
23	247	230	240	260	256	258	238	225	230	251	235	242
24	255	246	251	264	256	259	233	225	229	254	234	247
25	262	248	256	265	258	261	254	227	234	238	230	234
26	248	221	238	266	251	260	230	212	222	281	237	256
27	241	214	226	261	250	255	232	196	221	356	277	307
28	256	240	249	259	250	256	260	228	241	277	253	262
29	262	254	258	255	245	250	240	228	235	257	245	252
30	261	253	258	252	243	247	246	195	233	275	248	266
31	258	196	233	---	---	---	245	232	238	269	259	264
MONTH	284	169	247	275	191	255	284	178	230	420	223	255

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	264	246	256	219	211	216	208	199	203	211	196	201
2	251	243	247	217	208	212	208	184	201	207	195	201
3	252	240	246	215	207	212	183	159	172	212	199	206
4	257	246	251	215	208	211	197	183	192	212	203	208
5	247	241	243	216	192	203	191	108	135	214	206	210
6	278	241	256	217	202	213	175	138	159	212	200	206
7	294	276	287	214	206	210	193	177	186	206	199	202
8	276	255	262	220	207	214	192	188	190	210	201	205
9	260	249	253	217	201	208	193	186	189	213	203	207
10	267	246	254	212	205	207	193	189	191	211	203	208
11	296	246	268	215	205	210	194	187	190	213	205	209
12	271	244	259	226	205	213	196	188	190	215	206	210
13	242	212	226	226	143	203	195	190	192	221	211	216
14	220	190	199	169	143	155	194	188	191	221	212	217
15	204	197	201	201	166	186	197	189	193	225	213	219
16	210	200	206	205	199	202	205	191	198	221	212	216
17	221	209	215	217	203	208	203	188	195	221	212	216
18	230	221	225	216	199	207	198	188	193	227	215	221
19	232	218	226	208	197	203	199	191	195	229	220	223
20	226	219	223	216	201	208	207	195	201	231	224	228
21	234	222	228	218	205	212	206	199	203	228	219	225
22	247	223	239	212	109	179	208	201	204	229	219	225
23	239	228	233	168	110	138	209	199	203	232	216	224
24	231	167	219	192	170	185	206	198	201	233	221	226
25	207	182	190	198	190	195	206	175	193	234	226	230
26	216	206	212	199	194	197	196	176	188	231	223	228
27	220	215	218	202	196	199	193	182	187	238	226	231
28	220	217	219	203	196	199	198	185	192	240	228	233
29	---	---	---	204	197	200	203	194	198	239	231	234
30	---	---	---	206	195	199	203	194	199	236	225	229
31	---	---	---	204	197	200	---	---	---	233	223	228
MONTH	296	167	234	226	109	200	209	108	191	240	195	217

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	231	221	226	233	213	225	274	255	263	185	124	142
2	224	184	202	243	229	236	271	242	257	168	141	153
3	211	184	198	248	234	242	246	232	240	193	169	185
4	239	212	228	242	235	239	242	212	224	202	191	197
5	240	232	237	242	233	237	242	220	229	211	192	200
6	236	222	230	241	230	236	240	232	235	211	203	207
7	232	225	229	247	228	241	236	203	224	203	160	174
8	234	220	226	234	219	223	234	211	220	222	197	212
9	228	214	222	239	232	235	248	230	235	221	214	217
10	220	169	195	244	234	240	258	247	254	231	219	225
11	216	180	200	246	236	241	262	200	235	229	222	225
12	234	216	224	248	237	243	223	200	213	230	212	224
13	239	222	231	250	236	241	245	215	232	254	213	239
14	242	226	233	253	244	248	254	244	250	262	252	258
15	242	229	237	252	237	245	245	227	238	261	254	258
16	232	224	227	257	249	254	241	218	229	264	256	261
17	238	225	232	259	249	253	242	196	233	265	250	260
18	240	229	234	258	243	252	245	209	231	267	248	257
19	238	231	235	260	246	254	233	212	223	263	234	241
20	236	225	230	261	250	256	254	230	242	251	187	216
21	239	219	229	264	256	259	271	248	260	195	179	185
22	235	222	230	265	254	258	260	162	214	224	191	208
23	248	231	239	268	252	261	201	165	184	240	225	234
24	247	241	243	267	254	261	230	196	209	247	237	242
25	252	240	246	271	251	265	214	194	206	250	190	221
26	254	211	232	255	243	250	215	203	209	209	188	197
27	211	199	205	258	240	251	225	209	213	227	200	217
28	225	140	205	253	236	244	229	219	224	241	225	230
29	163	100	128	265	248	257	235	227	232	239	222	225
30	213	165	191	275	258	266	239	222	228	247	226	234
31	---	---	---	277	267	272	235	125	208	---	---	---
MONTH	254	100	221	277	213	248	274	125	229	267	124	218

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.5	7.4	7.4	7.3	7.2	7.2	8.0	7.7	7.8	7.6	7.5	7.5
2	7.5	7.4	7.4	7.4	7.3	7.4	7.9	7.7	7.8	7.6	7.5	7.5
3	7.4	7.3	7.4	7.4	7.4	7.4	7.9	7.5	7.8	7.6	7.5	7.5
4	7.4	7.3	7.4	7.4	7.4	7.4	7.9	7.4	7.7	7.6	7.5	7.5
5	7.4	7.3	7.4	7.5	7.4	7.4	7.9	7.4	7.7	7.6	7.5	7.5
6	7.5	7.4	7.4	7.5	7.5	7.5	7.9	7.6	7.7	7.6	7.5	7.5
7	7.5	7.4	7.5	7.5	7.4	7.5	7.7	7.1	7.4	7.5	7.4	7.4
8	7.5	7.4	7.4	7.6	7.4	7.5	7.3	7.0	7.2	7.5	7.4	7.4
9	7.4	7.0	7.2	7.6	7.5	7.5	7.4	7.3	7.3	7.5	7.4	7.4
10	7.4	7.1	7.2	7.5	7.5	7.5	7.5	7.4	7.4	7.4	7.3	7.4
11	7.5	7.4	7.4	7.5	7.4	7.5	7.5	7.4	7.4	7.3	7.3	7.3
12	7.5	7.5	7.5	7.6	7.5	7.5	7.4	7.4	7.4	7.3	7.3	7.3
13	7.5	7.5	7.5	7.6	7.5	7.5	7.6	7.5	7.5	7.4	7.3	7.4
14	7.5	7.4	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.4	7.3	7.3
15	7.5	7.5	7.5	7.7	7.5	7.6	7.6	7.5	7.5	7.2	7.1	7.1
16	7.6	7.5	7.5	7.7	7.5	7.6	7.5	7.5	7.5	7.1	7.1	7.1
17	7.6	7.5	7.5	7.7	7.6	7.6	7.5	7.5	7.5	7.1	7.1	7.1
18	7.7	7.5	7.6	7.7	7.5	7.6	7.6	7.5	7.5	7.1	7.0	7.1
19	7.7	7.6	7.6	7.8	7.5	7.6	7.7	7.6	7.6	7.3	7.0	7.1
20	7.6	7.5	7.5	7.9	7.5	7.7	7.6	7.5	7.5	7.3	7.2	7.2
21	7.2	7.1	7.2	7.9	7.6	7.8	7.7	7.5	7.5	7.3	7.2	7.2
22	7.4	7.2	7.3	8.0	7.6	7.8	7.6	7.5	7.5	7.3	7.2	7.2
23	7.5	7.4	7.4	8.0	7.6	7.8	7.6	7.5	7.5	7.3	7.2	7.2
24	7.5	7.4	7.4	8.1	7.7	7.8	7.6	7.5	7.5	7.3	7.2	7.2
25	7.4	7.4	7.4	8.1	7.6	7.8	7.6	7.5	7.5	7.3	7.2	7.2
26	7.4	7.3	7.4	8.1	7.7	7.9	7.6	7.5	7.5	7.3	7.2	7.3
27	7.5	7.4	7.4	8.1	7.6	7.8	7.7	7.6	7.6	7.3	7.2	7.3
28	7.5	7.5	7.5	7.9	7.5	7.7	7.6	7.5	7.5	7.3	7.3	7.3
29	7.5	7.4	7.5	7.7	7.5	7.6	7.6	7.6	7.6	7.4	7.3	7.3
30	7.5	7.4	7.5	7.9	7.5	7.7	7.7	7.6	7.6	7.3	7.3	7.3
31	7.4	7.2	7.3	---	---	---	7.6	7.6	7.6	7.3	7.3	7.3
MONTH	7.7	7.0	7.4	8.1	7.2	7.6	8.0	7.0	7.5	7.6	7.0	7.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.3	7.3	7.3	7.3	7.3	7.3	8.4	7.9	7.9	9.0	7.6	8.4
2	7.3	7.3	7.3	7.5	7.3	7.4	8.1	7.6	7.6	8.9	7.8	8.5
3	7.3	7.3	7.3	7.5	7.4	7.4	7.4	7.3	7.3	8.9	7.5	8.3
4	7.3	7.3	7.3	7.4	7.3	7.3	7.5	7.4	7.4	8.8	7.5	7.9
5	7.4	7.3	7.3	7.3	7.2	7.2	7.4	7.1	7.1	8.2	7.3	7.7
6	7.4	7.3	7.3	7.4	7.3	7.3	7.3	7.2	7.2	8.0	7.2	7.6
7	7.4	7.3	7.3	7.5	7.3	7.4	7.4	7.3	7.3	7.9	7.2	7.5
8	7.4	7.3	7.3	7.6	7.4	7.5	7.5	7.4	7.4	8.0	7.3	7.6
9	7.6	7.4	7.4	7.6	7.5	7.5	7.6	7.4	7.5	7.8	7.4	7.6
10	7.6	7.5	7.5	7.8	7.6	7.6	7.7	7.4	7.5	8.1	7.5	7.8
11	7.5	7.4	7.4	8.0	7.7	7.7	7.9	7.3	7.6	8.1	7.5	7.8
12	7.4	7.3	7.3	8.1	7.7	7.7	8.3	7.3	7.7	8.3	7.5	7.8
13	7.4	7.3	7.3	7.7	7.3	7.3	8.6	7.3	7.9	8.2	7.5	7.9
14	7.4	7.3	7.3	7.1	7.0	7.0	8.8	7.3	8.1	8.2	7.4	7.8
15	7.4	7.4	7.4	7.3	7.2	7.2	8.8	7.4	8.1	8.1	7.5	7.8
16	7.5	7.5	7.5	7.5	7.4	7.4	8.8	7.4	8.1	8.0	7.4	7.7
17	7.6	7.5	7.5	8.2	7.6	7.6	8.8	7.4	8.2	8.2	7.4	7.7
18	7.6	7.6	7.6	7.6	7.5	7.5	8.8	7.5	8.2	8.3	7.3	7.8
19	7.6	7.6	7.6	7.6	7.5	7.5	8.7	7.4	8.2	7.7	7.3	7.5
20	7.6	7.6	7.6	7.6	7.5	7.5	8.9	7.5	8.3	7.9	7.2	7.5
21	7.7	7.6	7.6	7.9	7.6	7.6	9.0	7.8	8.6	8.0	7.2	7.5
22	7.7	7.6	7.6	7.7	7.4	7.4	9.0	7.8	8.6	7.9	7.2	7.5
23	7.7	7.6	7.6	7.2	7.1	7.1	9.0	7.8	8.5	7.7	7.1	7.4
24	7.6	7.5	7.5	7.4	7.3	7.3	8.9	7.6	8.0	7.6	7.1	7.3
25	7.3	7.2	7.2	7.4	7.4	7.4	7.8	7.2	7.5	7.7	7.1	7.4
26	7.3	7.3	7.3	7.5	7.4	7.4	7.5	7.2	7.3	7.7	7.2	7.4
27	7.4	7.3	7.3	7.5	7.4	7.4	8.2	7.2	7.6	7.7	7.2	7.4
28	7.3	7.3	7.3	7.5	7.4	7.4	8.2	7.4	7.8	7.6	7.2	7.4
29	---	---	---	7.6	7.5	7.5	8.7	7.2	8.0	7.6	7.2	7.4
30	---	---	---	7.9	7.5	7.5	8.8	7.5	8.2	7.4	7.2	7.3
31	---	---	---	8.2	7.8	7.8	---	---	---	7.4	7.0	7.2
MONTH	7.7	7.2	7.4	8.2	7.0	7.4	9.0	7.1	7.8	9.0	7.0	7.7

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.3	7.2	7.2	7.2	7.1	7.1	8.0	7.3	7.6	7.1	6.9	7.0
2	7.2	6.9	7.1	7.3	7.2	7.2	7.6	7.3	7.4	7.1	6.9	7.0
3	7.1	6.9	7.0	7.5	7.2	7.3	7.3	7.1	7.2	7.4	7.1	7.2
4	7.3	7.1	7.2	7.6	7.2	7.4	7.4	7.0	7.2	7.6	7.2	7.4
5	7.2	7.2	7.2	7.9	7.2	7.5	7.4	7.0	7.2	7.6	7.2	7.3
6	7.2	7.2	7.2	8.0	7.3	7.6	7.4	7.1	7.2	7.7	7.2	7.4
7	7.3	7.2	7.2	7.5	7.2	7.4	7.3	7.0	7.1	7.4	7.0	7.1
8	7.3	7.2	7.3	7.9	7.2	7.5	7.3	7.0	7.1	7.6	7.2	7.3
9	7.3	7.2	7.2	7.8	7.2	7.5	7.5	7.0	7.2	7.6	7.3	7.4
10	7.2	7.1	7.2	8.0	7.3	7.6	7.7	7.1	7.3	7.8	7.3	7.5
11	7.3	7.2	7.2	8.1	7.4	7.7	7.4	7.0	7.2	8.0	7.4	7.6
12	7.4	7.2	7.3	7.9	7.3	7.6	7.3	7.0	7.1	8.1	7.4	7.7
13	7.4	7.2	7.3	8.1	7.3	7.6	7.3	7.1	7.2	8.2	7.4	7.7
14	7.3	7.2	7.3	8.4	7.3	7.9	7.3	7.2	7.2	8.1	7.5	7.7
15	7.3	7.2	7.3	8.5	7.4	8.0	7.4	7.1	7.2	8.3	7.4	7.8
16	7.4	7.1	7.3	8.7	7.5	8.2	7.3	7.1	7.2	8.0	7.5	7.7
17	7.6	7.2	7.4	8.4	7.6	8.1	7.4	7.1	7.2	7.9	7.3	7.6
18	8.1	7.3	7.6	8.5	7.5	8.0	7.4	7.1	7.3	7.9	7.3	7.6
19	8.5	7.4	7.9	8.4	7.4	7.9	7.4	7.2	7.3	8.2	7.3	7.6
20	8.3	7.4	7.9	8.1	7.3	7.6	7.6	7.3	7.4	7.6	7.1	7.2
21	8.1	7.3	7.7	8.4	7.3	7.8	7.9	7.4	7.6	7.2	7.0	7.1
22	8.1	7.4	7.8	8.3	7.3	7.8	7.6	7.1	7.3	7.2	7.1	7.1
23	8.0	7.4	7.7	8.3	7.4	7.8	7.1	7.0	7.1	7.3	7.2	7.2
24	8.0	7.4	7.7	8.3	7.4	7.7	7.3	7.1	7.2	7.4	7.2	7.3
25	7.8	7.4	7.6	7.9	7.3	7.6	7.4	7.2	7.3	7.3	7.2	7.2
26	7.4	7.0	7.2	7.5	7.2	7.3	7.5	7.3	7.4	7.2	7.2	7.2
27	7.2	7.0	7.1	7.7	7.3	7.4	7.8	7.3	7.5	7.3	7.2	7.3
28	7.7	6.7	7.2	7.8	7.2	7.4	8.1	7.4	7.7	7.4	7.2	7.3
29	6.8	6.6	6.7	8.1	7.3	7.6	8.3	7.5	7.9	7.4	7.2	7.4
30	7.1	6.8	7.0	7.8	7.3	7.5	8.5	7.5	8.1	7.5	7.3	7.4
31	---	---	---	8.1	7.3	7.6	8.5	7.0	7.8	---	---	---
MONTH	8.5	6.6	7.3	8.7	7.1	7.6	8.5	7.0	7.3	8.3	6.9	7.4

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.5	14.0	14.5	9.5	8.0	9.0	1.5	0.5	1.0	0.0	0.0	0.0
2	14.5	14.5	14.5	8.0	6.0	7.0	1.0	0.5	0.5	0.5	0.0	0.0
3	15.0	14.5	14.5	8.0	6.5	7.0	6.5	0.5	1.5	0.5	0.0	0.0
4	16.0	14.5	15.5	9.5	7.5	8.5	6.5	0.5	1.0	0.5	0.0	0.5
5	15.5	15.0	15.5	9.0	7.0	8.0	7.5	0.5	1.0	0.0	0.0	0.0
6	16.0	15.0	15.5	7.0	6.0	6.5	8.5	0.5	1.5	0.5	0.0	0.0
7	17.0	16.0	16.5	7.5	6.0	6.5	4.5	0.5	2.0	0.5	0.0	0.0
8	18.5	17.0	17.5	7.0	5.5	6.5	3.5	1.0	2.5	0.0	0.0	0.0
9	19.0	17.5	18.0	5.5	4.5	5.0	0.5	0.5	0.5	0.0	0.0	0.0
10	17.0	14.0	15.5	5.5	4.5	5.0	2.0	0.5	1.0	0.0	0.0	0.0
11	14.0	12.0	13.0	5.5	5.0	5.5	4.0	2.0	3.5	0.0	0.0	0.0
12	12.0	11.0	11.5	5.5	5.0	5.0	4.5	4.0	4.5	0.0	0.0	0.0
13	13.0	11.0	12.0	5.0	4.0	4.5	4.5	1.5	3.5	0.5	0.0	0.5
14	13.5	12.5	13.0	4.5	3.5	4.0	1.5	0.5	1.0	0.5	0.5	0.5
15	13.5	11.5	12.5	4.5	4.0	4.0	1.0	0.5	0.5	0.5	0.5	0.5
16	14.0	12.5	13.5	4.5	3.5	4.0	2.5	0.5	1.5	0.5	0.0	0.5
17	13.0	11.0	12.0	4.0	3.5	4.0	3.0	2.0	2.5	0.0	0.0	0.0
18	10.5	9.5	10.0	5.0	4.0	4.5	3.0	2.0	2.5	0.0	0.0	0.0
19	9.5	8.5	9.0	5.5	4.5	5.0	2.5	1.5	2.0	0.5	0.0	0.5
20	10.0	8.5	9.5	5.5	5.0	5.5	3.5	2.0	2.5	0.5	0.5	0.5
21	11.5	11.0	11.0	5.0	4.5	4.5	3.5	0.5	2.5	0.5	0.5	0.5
22	11.0	9.5	10.0	4.5	3.5	4.0	0.5	0.0	0.5	0.5	0.5	0.5
23	9.5	8.0	8.5	3.5	2.0	3.0	0.5	0.0	0.5	0.5	0.5	0.5
24	9.5	9.0	9.0	3.0	1.5	2.5	0.5	0.0	0.0	0.5	0.5	0.5
25	11.0	9.5	10.0	3.5	2.5	3.0	2.0	0.0	0.5	0.5	0.5	0.5
26	11.0	10.0	11.0	4.5	2.5	3.5	0.5	0.0	0.5	0.5	0.5	0.5
27	10.0	7.5	8.5	6.5	4.5	6.0	8.5	0.0	1.0	0.5	0.5	0.5
28	7.5	6.0	6.5	8.0	6.5	7.5	0.5	0.0	0.5	0.5	0.5	0.5
29	7.0	5.5	6.5	8.5	5.5	7.5	0.5	0.0	0.0	0.5	0.5	0.5
30	7.5	6.0	6.5	5.5	1.5	3.5	7.0	0.0	1.5	0.5	0.5	0.5
31	10.0	7.5	9.0	---	---	---	0.5	0.0	0.0	0.5	0.5	0.5
MONTH	19.0	5.5	12.0	9.5	1.5	5.5	8.5	0.0	1.5	0.5	0.0	0.5

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.5	0.5	0.5	7.0	5.5	6.0	14.5	12.5	13.5	17.5	14.5	16.0
2	0.5	0.5	0.5	6.5	5.0	6.0	13.5	10.5	11.5	18.0	16.5	17.0
3	0.5	0.5	0.5	6.5	4.5	5.5	15.0	10.5	12.5	20.0	17.0	18.5
4	0.5	0.5	0.5	8.5	6.5	7.0	14.5	10.5	12.5	19.0	15.5	17.0
5	0.5	0.5	0.5	9.5	8.0	8.5	10.5	8.5	9.0	17.5	14.5	16.0
6	0.5	0.5	0.5	9.5	8.5	9.0	10.0	8.0	9.0	20.5	17.0	19.0
7	0.5	0.5	0.5	8.5	7.5	8.0	10.5	8.0	9.5	20.5	19.0	20.0
8	0.5	0.5	0.5	8.5	6.5	7.5	11.5	9.5	10.5	19.5	17.0	18.5
9	0.5	0.5	0.5	9.5	6.5	8.0	10.5	8.5	9.5	18.0	12.5	15.0
10	0.5	0.5	0.5	10.5	8.5	9.5	11.5	8.5	10.0	13.5	11.0	12.5
11	0.5	0.5	0.5	11.5	9.0	10.5	14.5	11.0	12.5	15.5	12.0	14.0
12	0.5	0.5	0.5	12.5	11.0	11.5	17.0	13.0	15.0	17.5	14.0	16.0
13	0.5	0.5	0.5	13.5	12.5	13.0	18.0	15.0	16.5	20.0	17.0	18.5
14	0.5	0.5	0.5	12.5	11.0	11.5	18.0	16.0	17.0	20.5	18.5	19.5
15	0.5	0.5	0.5	12.5	10.5	11.5	17.0	14.0	15.5	19.5	17.5	18.5
16	0.5	0.5	0.5	12.5	11.0	11.5	16.0	13.5	15.0	19.5	17.0	18.5
17	0.5	0.5	0.5	11.5	9.5	10.5	16.0	13.5	15.0	21.0	18.0	19.5
18	0.5	0.5	0.5	10.5	8.5	9.0	16.5	13.5	15.0	23.0	20.0	21.5
19	0.5	0.5	0.5	9.0	7.0	8.0	16.5	15.0	16.0	23.0	22.0	22.5
20	1.5	0.5	1.0	8.5	7.0	7.5	17.5	15.0	16.0	23.0	21.0	22.0
21	2.0	1.0	1.5	9.5	6.5	8.0	18.5	15.5	17.0	24.5	21.5	23.0
22	2.0	0.5	1.0	9.5	7.5	8.5	20.5	17.5	19.0	24.5	22.0	23.5
23	5.0	1.5	3.0	8.5	6.0	7.0	21.5	19.5	20.5	24.0	22.5	23.5
24	5.5	4.5	5.0	8.5	7.0	7.5	21.0	17.5	19.5	24.0	22.0	23.0
25	5.5	3.5	4.5	7.5	5.5	7.0	17.5	15.0	16.5	23.5	22.5	23.0
26	6.5	4.5	5.5	9.0	6.0	7.5	17.0	15.5	16.0	24.5	21.5	23.0
27	9.5	6.0	7.5	10.5	7.5	9.0	15.5	14.0	14.5	24.5	21.5	23.0
28	9.5	7.5	8.5	10.5	10.0	10.0	15.0	13.5	14.5	24.5	21.5	23.5
29	---	---	---	14.5	10.0	12.0	15.5	12.5	14.0	24.5	22.5	23.5
30	---	---	---	18.0	14.0	16.0	16.5	13.0	14.5	23.0	19.5	21.0
31	---	---	---	17.5	14.5	16.5	---	---	---	19.5	19.0	19.0
MONTH	9.5	0.5	1.5	18.0	4.5	9.5	21.5	8.0	14.0	24.5	11.0	19.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	18.5	19.0	25.0	24.0	24.5	26.5	25.0	25.5	25.0	23.5	24.5
2	22.0	19.0	20.5	25.5	23.0	24.0	26.0	24.0	25.0	26.5	24.0	25.5
3	22.5	20.5	21.5	25.5	22.5	24.0	25.5	24.0	24.5	27.0	25.5	26.5
4	22.0	19.5	21.0	25.0	23.0	24.0	26.5	23.5	25.0	26.5	24.5	25.5
5	21.5	20.0	20.5	26.0	23.0	25.0	28.0	25.0	27.0	25.5	24.5	25.0
6	20.0	18.0	19.0	27.5	25.0	26.0	28.5	26.0	27.5	25.5	24.0	24.5
7	18.0	16.5	17.5	26.0	24.5	25.0	28.0	25.5	27.0	25.0	23.0	24.0
8	19.0	16.0	17.5	27.0	24.5	25.5	29.0	26.5	27.5	24.0	22.0	23.0
9	18.5	17.5	18.0	27.0	25.5	26.0	28.5	26.5	27.5	22.5	21.5	22.0
10	18.0	16.5	17.0	26.5	24.5	26.0	28.5	26.0	27.0	24.0	21.5	22.5
11	19.5	16.0	17.5	26.0	24.5	25.0	27.5	25.5	26.5	23.0	21.5	22.0
12	21.0	18.0	19.5	26.5	24.0	25.0	27.0	26.0	26.5	21.5	19.0	20.5
13	22.5	20.0	21.5	28.5	25.5	27.0	26.0	25.5	25.5	21.5	19.5	20.5
14	22.5	21.0	22.0	29.0	26.0	27.5	25.5	24.5	25.0	21.5	20.5	21.0
15	21.5	20.5	21.0	29.5	26.0	27.5	26.0	24.0	24.5	20.5	19.0	20.0
16	23.5	20.5	22.0	29.5	26.0	28.0	26.0	24.5	25.0	20.0	19.5	20.0
17	24.0	22.0	23.0	30.5	27.5	29.0	26.0	25.0	25.5	22.0	20.0	21.0
18	25.0	22.5	24.0	31.0	28.0	29.5	24.5	23.5	24.0	23.5	21.5	22.5
19	26.5	24.0	25.5	31.0	28.0	29.5	23.5	21.5	22.5	25.0	22.5	24.0
20	25.5	24.0	25.0	30.0	28.5	29.0	23.5	21.5	22.5	24.5	23.0	23.5
21	24.5	22.5	23.5	30.5	27.5	29.0	23.0	20.5	21.5	23.0	21.5	22.0
22	24.0	21.5	23.0	30.0	27.0	28.5	22.5	21.0	21.5	21.5	20.0	20.5
23	24.5	21.0	23.0	28.0	24.5	26.5	23.0	21.0	22.0	20.0	19.0	19.5
24	25.0	22.0	23.5	27.5	24.0	26.0	23.0	22.0	22.5	19.5	19.0	19.5
25	24.0	22.5	23.0	26.0	25.0	25.5	23.0	20.5	22.0	19.5	18.0	18.5
26	24.5	21.5	23.0	25.5	23.0	24.5	22.5	20.0	21.5	19.5	17.5	18.5
27	25.5	22.5	24.0	25.0	22.0	23.5	23.5	21.0	22.5	19.5	18.5	19.0
28	26.0	23.0	24.5	25.0	22.0	23.5	25.5	22.5	24.0	20.0	18.5	19.5
29	24.5	22.0	23.5	25.5	22.0	24.0	27.5	24.5	26.0	19.0	18.0	18.5
30	25.5	22.5	24.0	25.0	23.0	24.0	28.5	25.5	27.0	19.5	17.5	18.5
31	---	---	---	26.0	23.0	24.5	28.0	24.5	26.5	---	---	---
MONTH	26.5	16.0	21.5	31.0	22.0	26.0	29.0	20.0	25.0	27.0	17.5	21.5

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.0	9.7	9.9	11.9	11.1	11.5	15.1	13.6	14.3	---	---	---
2	10.1	9.7	9.9	12.4	11.9	12.1	14.5	13.6	14.0	---	---	---
3	10.4	10.1	10.3	---	---	---	16.8	13.5	14.9	---	---	---
4	10.8	8.6	10.1	---	---	---	16.6	14.0	15.5	---	---	---
5	9.5	9.0	9.2	---	---	---	17.1	14.0	15.7	14.2	13.6	13.9
6	10.6	9.3	9.6	---	---	---	16.8	13.9	16.0	14.4	13.4	13.8
7	9.9	9.1	9.6	---	---	---	15.9	12.4	14.3	13.6	13.2	13.3
8	9.6	8.9	9.2	13.0	12.8	12.9	13.8	12.7	13.3	13.8	13.0	13.4
9	8.9	7.7	8.4	13.7	12.9	13.3	15.0	13.9	14.4	13.8	13.2	13.5
10	9.5	8.0	9.0	13.5	13.0	13.2	14.9	13.7	14.6	13.4	13.0	13.1
11	9.9	9.1	9.4	13.4	12.7	13.1	14.4	13.6	14.0	13.3	13.0	13.1
12	11.2	9.4	10.2	13.6	12.9	13.3	14.1	13.1	13.5	13.6	13.3	13.4
13	10.9	10.4	10.7	13.9	13.1	13.5	14.7	13.2	14.0	14.5	13.4	14.0
14	10.5	10.0	10.3	14.2	13.4	13.8	16.0	14.7	15.4	14.2	13.0	13.7
15	10.4	10.3	10.3	14.2	13.4	13.8	16.1	15.1	15.5	13.2	13.0	13.1
16	---	---	---	14.3	13.3	13.8	15.1	14.2	14.6	13.2	13.0	13.0
17	---	---	---	14.5	13.5	14.0	14.5	13.9	14.2	13.4	13.0	13.1
18	---	---	---	14.2	13.3	13.7	14.9	14.0	14.5	13.4	13.0	13.
19	---	---	---	14.0	12.9	13.4	15.2	14.3	14.7	13.6	12.8	13.2
20	---	---	---	14.1	12.6	13.3	14.7	13.8	14.4	13.5	12.9	13.2
21	10.7	10.5	10.6	14.4	12.9	13.6	14.2	12.5	13.2	13.5	13.0	13.2
22	11.0	10.3	10.5	14.7	11.6	13.1	13.7	12.7	13.2	13.6	13.0	13.2
23	10.5	10.0	10.3	---	---	---	13.7	13.1	13.3	13.6	13.0	13.2
24	10.2	9.4	9.7	15.5	14.3	14.9	13.6	13.0	13.3	13.4	12.5	12.9
25	---	---	---	15.2	13.7	14.5	---	---	---	12.5	12.2	12.3
26	---	---	---	15.3	13.7	14.4	---	---	---	12.4	12.1	12.2
27	---	---	---	14.3	12.9	13.5	---	---	---	12.4	12.1	12.3
28	---	---	---	13.4	11.7	12.5	15.1	14.7	14.9	12.5	12.2	12.3
29	12.9	12.5	12.7	12.2	11.0	11.7	15.1	14.4	14.8	12.8	12.2	12.5
30	12.8	12.3	12.5	14.2	11.7	13.1	---	---	---	12.9	12.3	12.6
31	12.3	11.1	11.5	---	---	---	---	---	---	13.0	12.5	12.6
MONTH	12.9	7.7	10.2	15.5	11.0	13.3	17.1	12.4	14.4	14.5	12.1	13.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	12.0	12.3	12.2	11.6	11.9	11.8	9.4	10.6	12.9	8.9	10.8
2	12.8	12.2	12.5	12.5	11.6	12.1	10.6	9.7	10.2	11.9	8.5	10.1
3	12.5	12.2	12.4	12.8	12.0	12.3	10.2	9.5	10.0	12.2	8.1	10.0
4	12.4	12.0	12.1	12.1	11.1	11.6	10.4	9.3	9.9	9.8	8.0	8.9
5	12.3	11.8	12.0	11.3	10.9	11.1	10.5	9.1	9.8	11.2	8.8	9.7
6	12.5	11.6	12.1	11.5	10.8	11.1	11.0	8.4	10.2	10.3	7.9	8.8
7	13.1	12.0	12.5	12.2	11.2	11.7	11.4	10.7	11.0	9.7	7.2	8.4
8	13.2	12.4	12.7	12.5	11.4	12.0	11.2	10.5	10.8	10.1	7.7	8.8
9	13.7	12.4	13.0	12.2	11.2	11.7	11.8	10.7	11.2	10.3	8.0	9.2
10	13.5	12.8	13.1	12.1	10.5	11.3	11.9	10.7	11.3	11.5	9.7	10.6
11	13.1	12.7	12.9	12.3	10.3	11.2	11.5	9.9	10.7	11.3	9.5	10.3
12	12.8	11.8	12.5	12.1	10.1	11.0	11.4	9.4	10.2	11.0	8.7	9.8
13	12.6	12.2	12.4	10.4	9.1	9.5	11.6	8.7	10.0	10.4	8.0	9.1
14	12.1	10.8	11.3	10.2	9.2	9.8	11.8	8.4	9.9	10.0	7.3	8.6
15	---	---	---	10.3	9.9	10.1	12.2	8.8	10.3	10.2	7.6	8.8
16	13.3	12.8	13.1	10.8	9.9	10.3	12.4	9.0	10.5	10.2	7.8	9.0
17	13.5	13.2	13.4	11.4	10.3	10.9	12.3	9.0	10.5	10.2	7.8	8.9
18	14.0	13.4	13.6	11.0	10.5	10.8	12.3	9.0	10.5	10.2	7.1	8.5
19	13.5	13.2	13.4	12.0	10.8	11.4	11.6	8.6	10.1	8.9	6.6	7.7
20	13.1	12.6	12.7	12.0	11.1	11.6	12.5	8.8	10.4	9.5	6.6	8.0
21	13.4	12.6	13.0	12.8	11.4	12.0	12.5	8.6	10.5	9.5	6.7	7.9
22	13.7	13.2	13.4	11.5	9.8	10.6	12.0	8.2	10.0	---	---	---
23	13.4	12.6	13.1	---	---	---	11.3	7.5	9.4	---	---	---
24	12.1	10.8	11.9	11.6	11.4	11.5	9.2	7.2	8.3	---	---	---
25	---	---	---	12.2	11.5	11.8	10.1	8.0	9.0	8.9	6.8	8.0
26	---	---	---	12.1	11.3	11.7	9.2	7.8	8.5	8.9	6.7	7.7
27	12.2	11.8	12.0	11.8	10.9	11.4	10.6	8.3	9.3	8.6	6.6	7.5
28	11.6	11.0	11.3	11.2	10.6	10.9	10.6	8.5	9.4	8.4	6.6	7.4
29	---	---	---	11.3	9.7	10.7	12.4	8.2	10.3	8.3	6.3	7.3
30	---	---	---	10.8	9.1	9.8	12.7	9.3	10.9	7.6	6.6	7.2
31	---	---	---	10.5	8.6	9.6	---	---	---	8.6	7.2	7.8
MONTH	14.0	10.8	12.6	12.8	8.6	11.1	12.7	7.2	10.1	12.9	6.3	8.7

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.6	7.8	7.3	6.7	6.9	9.0	6.6	7.5	7.4	6.9	7.1
2	7.7	6.8	7.3	7.6	6.9	7.2	8.0	6.5	7.1	7.5	6.8	7.1
3	7.1	6.7	6.9	8.0	7.0	7.5	7.4	6.1	6.7	8.0	6.5	7.2
4	7.9	6.9	7.3	8.0	7.0	7.5	7.9	6.5	7.0	8.6	6.7	7.5
5	7.5	7.0	7.3	8.4	6.9	7.6	7.9	5.9	6.8	8.4	6.8	7.4
6	7.5	7.2	7.3	8.7	6.7	7.4	7.5	6.0	6.6	8.8	6.9	7.7
7	8.0	7.5	7.8	7.7	6.2	6.9	7.0	5.7	6.3	7.4	6.6	6.8
8	8.2	7.7	8.0	8.5	6.5	7.4	7.0	5.6	6.1	8.7	6.9	7.7
9	7.7	7.4	7.6	8.4	6.5	7.4	7.6	5.6	6.5	8.9	7.5	8.0
10	8.3	7.4	7.9	8.7	6.7	7.7	8.2	5.9	6.8	9.4	7.5	8.2
11	8.4	7.9	8.3	9.1	6.7	7.8	6.6	6.1	6.3	9.5	7.4	8.3
12	8.3	7.8	8.0	8.6	6.8	7.5	7.3	5.8	6.4	10.3	7.9	8.9
13	8.2	7.5	7.8	8.9	6.4	7.5	7.3	6.2	6.7	10.8	8.0	9.1
14	7.9	7.2	7.6	9.9	6.2	7.8	6.9	6.2	6.6	9.9	7.9	8.7
15	8.1	7.2	7.6	10.1	6.5	8.1	7.4	6.4	6.8	10.8	8.0	9.1
16	8.4	7.3	7.8	10.9	6.5	8.4	7.3	6.2	6.6	9.9	8.1	9.0
17	8.7	7.2	7.8	9.5	6.4	7.7	7.0	5.9	6.4	9.9	7.8	8.7
18	9.3	7.2	8.1	9.8	6.0	7.5	7.6	6.5	7.0	9.7	7.4	8.4
19	10.0	6.9	8.4	9.4	5.8	7.2	7.7	6.8	7.2	10.2	7.2	8.3
20	9.8	6.8	8.3	8.3	5.5	6.6	8.2	7.0	7.5	7.7	6.8	7.1
21	9.5	7.0	8.2	9.4	5.4	7.0	9.0	7.3	8.0	8.0	7.0	7.4
22	9.7	7.5	8.6	9.6	5.8	7.3	7.7	6.8	7.2	8.0	7.4	7.6
23	9.4	7.6	8.4	9.9	6.4	7.7	---	---	---	8.5	7.8	8.1
24	9.2	7.3	8.2	9.9	6.7	7.9	7.8	7.4	7.6	8.6	7.9	8.1
25	8.4	7.1	7.8	8.5	6.5	7.2	8.4	7.4	7.9	8.4	7.9	8.2
26	7.4	6.4	7.0	8.1	6.4	7.1	8.9	7.7	8.2	8.5	8.1	8.4
27	7.0	6.3	6.6	8.6	6.8	7.5	9.4	7.9	8.5	8.5	7.9	8.2
28	8.5	6.4	7.0	9.3	6.9	7.8	9.8	7.7	8.6	8.4	7.9	8.1
29	6.4	5.2	6.1	9.7	7.2	8.2	10.3	7.4	8.6	9.0	7.9	8.4
30	7.1	6.3	6.7	8.8	6.8	7.5	10.7	7.1	8.6	9.2	8.3	8.6
31	---	---	---	9.6	6.7	7.9	10.6	6.8	8.1	---	---	---
MONTH	10.0	5.2	7.7	10.9	5.4	7.5	10.7	5.6	7.2	10.8	6.5	8.0

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	26	23	25	40	6	3.3	3	1.5	2	0.81	12	11
2	11	7.3	4	4.3	5	2.8	3	1.5	5	2.0	10	8.4
3	83	215	2	1.9	10	5.1	3	1.5	6	2.6	10	7.7
4	47	58	3	2.6	8	4.0	3	1.5	8	3.9	24	25
5	20	14	3	2.3	6	2.9	3	1.5	6	2.6	102	237
6	17	11	2	1.5	4	1.9	5	2.5	6	2.4	26	29
7	17	10	1	0.72	150	391	4	2.0	6	2.4	12	11
8	25	14	1	0.68	115	201	5	2.6	6	2.4	9	7.9
9	191	1030	1	0.65	30	26	6	3.1	5	2.3	7	6.6
10	111	315	1	0.63	15	11	25	30	4	2.2	8	7.3
11	20	19	1	0.61	10	7.1	30	49	25	20	9	7.4
12	15	11	2	1.2	8	5.8	6	5.5	130	246	10	6.9
13	14	9.6	2	1.2	5	3.5	5	3.3	125	304	446	2270
14	15	9.6	2	1.1	5	3.0	4	2.5	120	259	933	5480
15	12	7.1	2	1.1	7	4.3	3	1.8	35	57	90	134
16	11	6.4	2	1.1	6	3.8	3	1.7	15	20	32	42
17	10	5.6	2	1.1	5	3.0	3	1.6	10	9.7	15	17
18	8	4.3	1	0.53	5	2.9	4	2.1	9	6.7	21	27
19	6	3.2	1	0.52	4	2.3	4	1.9	9	6.1	25	31
20	20	11	2	1.0	7	4.0	4	1.9	9	6.2	12	12
21	275	1490	2	1.0	8	6.1	4	1.9	8	5.0	6	6.2
22	30	46	2	1.0	5	2.7	4	1.8	9	5.0	657	6670
23	6	6.5	3	1.5	6	3.5	4	1.8	8	5.1	431	3910
24	4	3.2	6	3.1	5	2.7	4	1.8	531	3470	58	115
25	7	7.4	5	2.7	6	3.9	4	2.1	1280	9330	22	35
26	22	36	5	2.7	5	3.0	3	1.5	107	146	16	23
27	9	8.5	5	2.8	4	2.5	3	1.5	28	30	13	17
28	3	2.4	6	3.3	3	1.7	3	1.4	19	21	12	15
29	2	1.5	9	6.2	2	1.1	3	1.3	---	---	12	15
30	1	0.70	7	4.9	2	1.1	3	1.2	---	---	12	14
31	60	174	---	---	3	1.5	2	0.81	---	---	15	17
TOTAL	---	3560.30	---	93.94	---	718.5	---	136.11	---	13970.41	---	19215.4

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10	11	6	5.5	15	8.8	47	26	26	7.7	210	443
2	65	109	6	5.3	131	220	28	14	24	13	37	26
3	90	204	6	5.4	95	56	21	9.8	25	13	19	12
4	25	31	10	8.6	26	13	19	8.4	33	20	20	10
5	581	6460	7	7.1	21	10	19	8.4	30	12	22	10
6	100	348	6	6.4	23	12	15	6.6	25	11	30	15
7	24	50	5	4.9	21	13	27	20	35	25	90	48
8	17	31	5	4.3	16	7.9	25	14	18	7.0	34	13
9	9	15	6	5.0	27	19	20	9.5	20	7.0	18	6.8
10	9	14	4	3.2	90	110	14	6.4	17	5.9	15	5.7
11	10	15	3	2.3	60	40	13	5.6	65	57	14	4.9
12	12	17	4	2.9	35	19	15	6.8	40	20	15	4.7
13	11	15	5	3.5	21	11	12	5.3	22	10	12	3.7
14	11	15	6	4.1	22	11	11	4.4	55	30	17	5.0
15	9	12	7	4.7	24	14	12	4.5	39	24	11	3.3
16	9	10	7	4.6	20	11	12	4.3	22	9.7	10	2.9
17	10	12	6	4.0	18	8.7	11	3.9	55	31	14	6.2
18	9	10	6	3.9	16	8.5	9	3.0	60	43	14	5.7
19	8	8.7	6	4.3	17	8.1	9	3.1	25	11	10	3.5
20	7	6.7	6	4.0	20	9.7	10	3.4	19	7.2	110	135
21	6	5.5	8	5.1	22	11	11	3.7	18	6.3	35	21
22	7	6.5	7	4.2	20	8.6	11	3.4	155	325	27	13
23	8	7.3	7	4.0	19	8.2	12	3.3	75	43	19	8.6
24	13	12	6	3.5	18	7.3	12	3.3	40	20	16	7.4
25	22	31	9	5.0	16	6.2	16	5.2	26	15	84	140
26	17	22	11	6.2	87	78	27	13	12	5.2	44	36
27	9	11	9	4.7	70	38	18	6.3	10	3.8	23	15
28	8	8.0	9	4.6	248	1560	19	5.6	6	2.1	28	22
29	8	8.9	10	4.9	694	4810	23	6.8	7	2.4	34	20
30	7	6.8	9	4.4	80	57	24	6.9	6	2.0	21	10
31	---	---	8	4.0	---	---	20	6.2	113	217	---	---
TOTAL	---	7513.4	---	144.6	---	7195.0	---	231.1	---	1006.3	---	1057.4

TOTAL LOAD FOR YEAR: 54842.46 TONS.

01481500 BRANDYWINE CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°46'09", long 75°34'25", New Castle County, Hydrologic Unit 02040205, on right bank in Rockford Park, 0.2 mi (0.3 km) downstream from Henry Clay Bridge, in Wilmington, and 4.2 mi (6.8 km) upstream from mouth.

DRAINAGE AREA.--314 mi² (813 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year. Prior to December 1946 monthly discharge only, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1948, 1950.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 68.23 ft (20.797 m) above mean sea level.

REMARKS.--Water-discharge records good. Some diurnal fluctuation at low flow caused by mills above station. Flow regulated since November 1973 by Marsh Creek Reservoir about 27 mi (43 km) upstream. No diversion just above station by plant of E. I. du Pont de Nemours & Co. since June 13, 1960.

AVERAGE DISCHARGE.--31 years, 465 ft³/s (13.17 m³/s), 20.11 in/yr (511 mm/yr), adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft³/s (821 m³/s) June 23, 1972, gage height, 15.49 ft (4.721 m), from rating curve extended above 18,000 ft³/s (510 m³/s); minimum, about 30 ft³/s (0.85 m³/s) Dec. 26, 1948, during period of ice effect; minimum daily, 56 ft³/s (1.59 m³/s) Aug. 23, 24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft³/s)	(m³/s)	(ft)	(m)			(ft³/s)	(m³/s)	(ft)	(m)
Mar. 23	0530	*4900	139	7.73	2.356	Apr. 5	1645	4860	138	7.70	2.347

Minimum discharge, 110 ft³/s (3.12 m³/s) Aug. 1; minimum daily, 115 ft³/s (3.26 m³/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	689	217	169	170	409	445	391	253	254	139	947
2	225	364	229	205	170	352	714	374	657	226	197	321
3	597	331	179	206	180	320	1160	405	295	203	215	246
4	609	326	194	209	190	418	615	364	231	192	276	223
5	276	310	209	194	170	946	3360	457	220	193	177	179
6	245	290	205	190	150	553	1720	511	233	191	171	185
7	225	276	992	197	150	417	1010	472	269	301	342	238
8	209	263	1040	183	150	370	872	378	234	259	179	169
9	1330	250	370	205	160	389	811	359	400	210	169	164
10	1190	245	326	326	200	376	744	343	623	194	164	158
11	370	237	295	491	300	348	711	330	316	190	365	154
12	295	229	300	276	800	281	680	316	255	194	241	150
13	267	221	290	225	1030	929	639	308	234	191	198	147
14	245	225	250	233	927	2080	653	296	226	182	246	142
15	221	217	250	237	513	762	597	282	265	170	281	138
16	213	209	263	217	365	637	522	273	244	164	198	133
17	205	221	250	190	282	545	539	268	220	160	265	163
18	205	213	245	180	251	607	510	270	233	156	349	194
19	194	213	237	210	262	604	497	295	216	156	193	187
20	378	209	237	210	265	433	418	272	210	157	174	519
21	2020	213	321	200	253	446	401	264	236	150	163	291
22	575	213	224	190	217	1670	397	245	198	145	580	190
23	364	205	245	180	248	2780	392	232	188	140	283	192
24	326	197	209	180	629	993	407	230	177	135	210	186
25	378	205	197	200	2230	778	670	227	177	130	255	488
26	728	205	258	200	687	693	623	221	373	212	195	402
27	463	213	217	190	507	631	608	215	260	166	172	277
28	331	213	221	180	500	591	461	206	331	140	167	322
29	286	245	229	160	---	586	522	202	1870	130	160	253
30	272	267	183	160	---	542	443	198	356	120	154	201
31	890	---	213	170	---	506	---	209	---	115	190	---
TOTAL	14427	7714	9095	6563	11956	21992	22141	9413	10000	5526	7068	7559
MEAN	465	257	293	212	427	709	738	304	333	178	228	252
MAX	2020	689	1040	491	2230	2780	3360	511	1870	301	580	947
MIN	194	197	179	160	150	281	392	198	177	115	139	133
(≠)	+4.6	-3.2	-0.8	-.05	+6.5	-5.9	+1.3	-3.6	+1.3	-1.8	+4.1	+0.2
MEAN*	470	254	292	212	434	703	739	300	334	176	232	252
CFSM*	1.50	.81	.93	.68	1.38	2.24	2.35	.96	1.06	.56	.74	.80
IN*	1.73	.90	1.07	.78	1.44	2.58	2.63	1.10	1.19	.65	.85	.90

CAL YR 1976 TOTAL 160793 MEAN 439 MAX 3540 MIN 122 MEAN* 441 CFSM* 1.40 IN* 19.11
WTR YR 1977 TOTAL 133454 MEAN 366 MAX 3360 MIN 115 MEAN* 366 CFSM* 1.17 IN* 15.81

≠ Change in contents in Marsh Creek Reservoir, equivalent in cubic feet per second, furnished by Pennsylvania Department of Environmental Resources.

* Adjusted for change in reservoir contents.

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1956 to September 1961, February 1971 to September 1973, October 1974 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1946 to September 1961, July 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 30.5°C July 18, 19, 1977; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,700 mg/L Feb. 14, 1966; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 35,700 tons (32,400 tonnes), Feb. 14, 1971; minimum daily, less than 0.50 ton (0.45 tonnes) on many days.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum daily, 30.5°C July 18, 19; minimum daily, 0.0°C on many days during winter period.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,150 mg/L Feb. 25; minimum daily mean, 2 mg/L Nov. 21, Apr. 13, May 16.
SEDIMENT LOADS: Maximum daily, 7,780 tons (7,060 tonnes) Feb. 25; minimum daily, 1.2 tons (1.09 tonnes) Nov. 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
OCT 01...	1240	320	225	7.8	18.0	15.0	--	8.3	--
NOV 01...	1330	611	175	6.6	8.5	9.0	20	11.5	62
DEC 01...	1140	217	227	11.1	12.0	2.0	--	14.2	--
JAN 03...	1220	180	310	8.5	--	1.0	0	--	88
MAR 01...	1300	382	200	7.7	9.0	4.5	0	11.6	78
APR 04...	1220	580	189	7.7	7.5	10.5	--	11.6	--
MAY 02...	1245	371	210	8.5	22.5	15.0	--	10.9	--
JUN 01...	1210	237	202	7.7	22.5	18.5	0	8.9	76
JUL 01...	1250	246	175	7.9	23.0	24.0	--	8.5	--
AUG 01...	1130	110	258	7.8	27.5	25.0	--	8.1	--
SEP 01...	1145	1100	210	7.5	27.0	23.5	40	8.5	74

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT 01...	--	--	--	--	--	--	--	--	--
NOV 01...	26	15	6.0	6.9	3.8	44	27	12	.2
DEC 01...	--	--	--	--	--	--	--	--	--
JAN 03...	34	21	8.6	12	2.6	66	24	18	.1
MAR 01...	40	20	6.9	10	3.4	47	23	18	.1
APR 04...	--	--	--	--	--	--	--	--	--
MAY 02...	--	--	--	--	--	--	--	--	--
JUN 01...	25	19	7.0	10	2.6	63	20	16	.1
JUL 01...	--	--	--	--	--	--	--	--	--
AUG 01...	--	--	--	--	--	--	--	--	--
SEP 01...	33	19	6.5	9.3	4.0	50	20	13	.1

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT 01...	--	--	--	--	--	--	--	--	--
NOV 01...	11	105	104	1.9	.03	1200	110	80	50
DEC 01...	--	--	--	--	--	--	--	--	--
JAN 03...	12	141	131	3.2	.20	280	30	60	60
MAR 01...	11	125	116	2.4	.14	460	220	70	50
APR 04...	--	--	--	--	--	--	--	--	--
MAY 02...	--	--	--	--	--	--	--	--	--
JUN 01...	11	127	117	2.1	.15	1000	80	110	60
JUL 01...	--	--	--	--	--	--	--	--	--
AUG 01...	--	--	--	--	--	--	--	--	--
SEP 01...	7.3	135	106	1.5	.53	7800	2300	290	100

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	9.0	2.0	---	---	6.0	14.0	15.0	19.0	24.5	26.0	24.5
2	---	---	1.5	---	---	5.0	10.5	17.0	18.5	24.5	25.0	25.0
3	15.0	---	0.5	1.0	---	6.0	12.0	18.5	20.5	---	25.0	26.0
4	17.0	---	1.0	0.5	---	6.0	11.0	---	20.5	25.0	25.0	---
5	16.0	---	1.0	0.5	---	8.0	8.5	16.5	20.5	26.0	26.5	25.0
6	17.0	---	1.0	0.5	---	---	9.0	19.0	18.5	26.5	28.0	25.5
7	18.0	---	2.0	0.5	---	8.0	9.5	19.5	18.0	25.0	27.5	24.0
8	19.0	---	2.0	---	---	7.5	10.0	18.5	18.0	25.5	28.0	23.5
9	19.5	---	0.5	---	---	9.0	9.5	15.0	17.0	25.0	27.0	22.0
10	16.0	---	2.0	0.5	---	9.5	13.0	12.5	15.0	24.5	27.5	23.0
11	13.0	---	3.0	---	---	11.0	---	13.0	16.5	25.0	---	---
12	15.0	---	---	---	---	11.0	16.5	15.0	20.0	26.0	26.0	21.0
13	13.0	---	2.5	---	---	11.5	18.0	18.0	20.5	27.0	25.5	21.5
14	14.0	---	1.0	---	---	11.0	18.0	18.5	22.0	28.0	25.0	22.0
15	13.5	---	1.5	---	---	12.0	16.5	---	21.0	28.5	24.0	20.0
16	---	---	1.0	---	---	12.0	16.0	18.0	22.5	29.0	25.0	19.5
17	---	---	1.5	---	---	10.5	---	20.5	22.5	28.5	25.0	20.5
18	---	---	3.0	---	---	9.0	16.0	21.5	24.5	30.5	23.0	22.0
19	---	---	2.0	---	---	8.0	17.0	22.0	---	30.5	22.0	24.0
20	---	5.0	3.0	---	---	---	16.0	22.0	25.5	29.5	22.5	23.0
21	---	4.5	1.0	---	---	8.0	17.5	23.0	23.5	29.0	---	22.0
22	---	3.5	0.5	---	---	8.0	19.0	22.5	23.5	29.0	22.0	20.0
23	---	2.5	0.5	---	---	7.0	20.5	23.0	23.0	27.5	22.0	---
24	---	2.0	0.0	---	---	7.0	18.0	23.5	24.0	26.5	22.0	---
25	---	2.5	0.5	---	4.0	7.0	16.5	22.5	23.0	25.0	21.0	---
26	---	4.0	---	---	7.0	---	15.0	24.0	24.0	24.0	22.0	18.5
27	---	5.5	0.0	---	---	9.5	14.5	24.0	24.0	24.0	23.5	23.5
28	---	6.5	0.5	---	7.5	10.0	14.5	24.0	24.5	24.0	25.0	19.0
29	---	6.0	0.5	---	---	12.0	14.0	23.5	21.5	24.5	26.0	19.5
30	---	3.0	---	---	---	17.0	14.5	20.5	24.0	24.0	27.0	18.5
31	---	---	---	---	---	16.0	---	20.0	---	26.0	27.0	---

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	25	20	27	50	5	2.9	9	4.1	4	1.8	12	13
2	10	6.1	15	15	4	2.5	8	4.4	4	1.8	7	6.7
3	96	239	13	12	3	1.4	8	4.4	4	1.9	7	6.0
4	55	90	12	11	4	2.1	10	5.6	6	3.1	15	17
5	23	17	10	8.4	3	1.7	13	6.8	6	2.8	90	230
6	15	9.9	8	6.3	3	1.7	11	5.6	6	2.4	23	34
7	16	9.7	8	6.0	100	268	10	5.3	7	2.8	8	9.0
8	26	15	7	5.0	160	449	9	4.4	7	2.8	6	6.0
9	190	1010	7	4.7	56	56	10	5.5	6	2.6	5	5.3
10	118	495	8	5.3	18	16	20	18	6	3.2	5	5.1
11	15	15	9	5.8	9	7.2	30	40	30	24	5	4.7
12	13	10	8	4.9	7	5.7	10	7.5	120	259	5	3.8
13	12	8.7	6	3.6	6	4.7	8	4.9	115	320	285	1960
14	11	7.3	5	3.0	6	4.1	8	5.0	120	300	809	5060
15	9	5.4	6	3.5	5	3.4	8	5.1	35	48	145	298
16	8	4.6	7	4.0	6	4.3	7	4.1	15	15	38	65
17	7	3.9	7	4.2	7	4.7	7	3.6	10	7.6	16	24
18	6	3.3	8	4.6	6	4.0	7	3.4	9	6.1	15	25
19	6	3.1	6	3.5	4	2.6	6	3.4	9	6.4	15	24
20	59	158	4	2.3	5	3.2	6	3.4	9	6.4	12	14
21	379	2620	2	1.2	13	11	6	3.2	8	5.5	8	9.6
22	38	59	3	1.7	12	7.3	7	3.6	8	4.7	290	2400
23	12	12	3	1.7	13	8.6	7	3.4	9	6.0	420	3770
24	6	5.3	4	2.1	11	6.2	6	2.9	265	1350	80	214
25	10	10	4	2.2	9	4.8	6	3.2	1150	7780	28	59
26	27	53	4	2.2	8	5.6	5	2.7	195	362	17	32
27	10	13	4	2.3	9	5.3	5	2.6	50	68	12	20
28	7	6.3	3	1.7	14	8.4	5	2.4	16	22	11	18
29	8	6.2	5	3.3	12	7.4	5	2.2	---	---	10	16
30	7	5.1	6	4.3	10	4.9	5	2.2	---	---	9	13
31	59	142	---	---	9	5.2	5	2.3	---	---	10	14
TOTAL	---	5062.9	---	185.8	---	919.9	---	175.2	---	10615.9	---	14376.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11	13	4	4.2	19	13	46	32	9	3.4	200	511
2	55	106	4	4.0	72	150	40	24	11	5.9	35	30
3	115	360	5	5.5	73	58	30	16	16	9.3	20	13
4	35	58	5	4.9	40	25	25	13	17	13	18	11
5	521	5430	6	7.4	53	31	21	11	11	5.3	16	7.7
6	95	441	8	11	25	16	21	11	11	5.1	11	5.5
7	18	49	9	11	22	16	28	23	24	22	40	26
8	10	24	8	8.2	17	11	28	20	13	6.3	30	14
9	8	18	12	12	45	49	21	12	14	6.4	20	8.9
10	5	10	16	15	70	118	18	9.4	15	6.6	12	5.1
11	4	7.7	8	7.1	53	45	19	9.7	55	54	13	5.4
12	3	5.5	7	6.0	42	29	19	10	20	13	14	5.7
13	2	3.5	8	6.7	27	17	17	8.8	18	9.6	13	5.2
14	3	5.3	10	8.0	26	16	16	7.9	20	13	13	5.0
15	6	9.7	7	5.3	33	24	16	7.3	18	14	11	4.1
16	4	5.6	2	1.5	25	16	14	6.2	16	8.6	12	4.3
17	4	5.8	4	2.9	23	14	10	4.3	35	25	15	6.6
18	4	5.5	5	3.6	21	13	11	4.6	45	42	15	7.9
19	6	8.1	6	4.8	20	12	11	4.6	23	12	15	7.6
20	7	7.9	7	5.1	30	17	8	3.4	17	8.0	90	126
21	6	6.5	6	4.3	38	24	8	3.2	16	7.0	29	23
22	6	6.4	5	3.3	27	14	7	2.7	142	285	22	11
23	6	6.4	6	3.8	30	15	7	2.6	63	48	21	11
24	7	7.7	10	6.2	26	12	8	2.9	45	26	20	18
25	12	22	21	13	23	11	9	3.2	30	21	70	92
26	10	17	14	8.4	38	38	14	8.0	16	8.4	45	49
27	9	15	9	5.2	42	29	16	7.2	17	7.9	27	20
28	7	8.7	8	4.4	98	306	11	4.2	14	6.3	23	20
29	8	11	10	5.5	842	5940	8	2.8	11	4.8	16	11
30	6	7.2	11	5.9	126	121	9	2.9	10	4.2	14	7.6
31	---	---	12	6.8	---	---	9	2.8	45	23	---	---
TOTAL	---	6681.5	---	201.0	---	7200	---	280.7	---	724.1	---	1064.6

TOTAL LOAD FOR YEAR: 47487.8 TONS.

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE

LOCATION.--Lat 39°41'21", long 75°31'19", New Castle County, Hydrologic Unit 02040205, at tidal-gaging station located on channel side of west tower of south bridge between Pigeon Point, Del., and Deepwater Point, N. J.

DRAINAGE AREA.--11,030 mi² (28,570 km²).

PERIOD OF RECORD.--July 1955 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: January 1968 to current year.
WATER TEMPERATURES: October 1956 to current year.
DISSOLVED OXYGEN: November 1962 to current year.

REMARKS.--Water-quality monitor records less than 80 percent complete for most parameters. Extremes for period of record are those recorded when monitor was in operation.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 12,700 micromhos Nov. 13, 1966; minimum, 100 micromhos on many days.
pH: Maximum, 9.3 Nov. 10-11, 13, 1970; minimum, 4.2 Nov. 6, 1969.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 9, 1968; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 13.5 mg/L Dec. 29, 1969; minimum, 0.0 mg/L on many days during summer periods.

EXTREMES FOR CURRENT YEAR.--
pH: Maximum, 7.4 Jan. 3-7, 9, 10, 14; minimum, 6.1 Feb. 19.
WATER TEMPERATURES: Maximum, 30.5°C on July 18, 19, 21, 22; minimum, 0.0°C Jan. 9-13.
DISSOLVED OXYGEN: Maximum, 12.1 mg/L Jan. 14; minimum, 1.1 mg/L Sept. 29, 30.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	5860	2550	4280	---	---	---	2550	354	1130			
2	6160	2600	4280	---	---	---	1750	400	882			
3	6290	2200	4120	3220	1870	2340	1050	268	609			
4	6270	2260	4050	3220	1860	2320	1430	330	737			
5	6760	2260	4130	3210	1890	2280	1180	320	689			
6	6760	1010	3600	2490	1910	2090	1380	374	824			
7	5790	1000	3380	2390	1960	2080	1900	432	948			
8	7040	2240	5140	2360	2000	2080	1230	300	666			
9	7690	1150	4150	3330	2020	2220	802	290	465			
10	6760	2090	4590	2700	1980	2240	940	296	447			
11	6420	4000	4700	2600	2000	2220	500	302	366			
12	4760	4010	4350	3470	2030	2380	642	306	395			
13	4780	4010	4370	2660	2050	2290	528	314	359			
14	4760	4300	4480	3470	2050	2390	650	316	375			
15	4710	4000	4440	3240	2090	2450	572	318	404			
16	4540	4240	4380	---	---	---	624	332	440			
17	4680	4000	4420	---	---	---	724	348	488			
18	4570	3000	4310	---	---	---	682	328	443			
19	---	---	---	---	---	---	998	328	487			
20	---	---	---	---	---	---	1260	330	609			
21	---	---	---	---	---	---	914	298	462			
22	---	---	---	1810	430	817	688	292	390			
23	---	---	---	2230	430	1110	846	304	476			
24	---	---	---	2340	460	1150	800	310	487			
25	---	---	---	2480	510	1300	1020	316	619			
26	---	---	---	2380	550	1380	1020	262	601			
27	4960	2040	2630	2640	500	1430	1170	324	605			
28	3110	1970	2320	3120	580	1490	1140	348	666			
29	2910	1960	2240	2540	610	1460	---	---	---			
30	2640	1970	2270	2190	500	1240	---	---	---			
31	---	---	---	---	---	---	---	---	---			
MONTH	7690	1000	3940	3470	430	1850	2550	262	574			

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	1610	340	704	190	170	179	540	250	285
2	---	---	---	600	300	379	230	180	189	610	250	306
3	---	---	---	---	---	---	230	170	185	510	250	303
4	8490	2740	5430	---	---	---	200	180	186	560	250	354
5	10400	2760	6190	---	---	---	210	160	179	830	250	421
6	7220	1900	4180	---	---	---	180	150	164	990	250	468
7	8100	2730	5140	270	210	233	170	150	159	1100	260	465
8	8290	3190	5630	260	180	218	170	140	153	850	260	455
9	10000	3900	6720	260	170	212	170	150	153	420	250	298
10	9890	4230	6940	270	160	203	170	140	151	1180	260	457
11	10200	4000	7800	230	160	192	170	150	151	1170	260	610
12	10200	4430	7280	230	160	187	160	140	152	1500	250	593
13	11100	4520	7910	250	160	192	160	150	157	1450	250	586
14	10900	4380	7500	200	150	172	170	160	162	1630	260	659
15	10500	3790	6730	---	---	---	180	160	169	2240	260	698
16	9440	3070	5970	---	---	---	180	170	171	1980	270	794
17	9100	3240	5980	---	---	---	190	170	177	2050	260	814
18	9990	3360	6250	---	---	---	200	170	182	1840	270	833
19	10100	3790	6600	---	---	---	200	180	185	2240	310	1030
20	10500	3920	6940	---	---	---	220	190	195	2520	310	1100
21	9070	3330	6400	---	---	---	230	110	199	2100	250	1030
22	9060	3620	6130	---	---	---	310	200	217	2950	260	1050
23	8100	3410	5690	---	---	---	280	210	225	2380	260	1070
24	8880	3890	6530	---	---	---	310	220	245	2320	200	1120
25	7460	790	4450	---	---	---	300	230	255	2480	200	1160
26	3940	720	1970	---	---	---	300	210	251	2430	340	1360
27	3170	530	1480	---	---	---	260	230	238	2550	350	1440
28	1590	390	857	---	---	---	250	230	238	3880	450	1620
29	---	---	---	---	---	---	270	240	246	4540	550	1880
30	---	---	---	---	---	---	390	240	259	4070	390	2130
31	---	---	---	---	---	---	---	---	---	4670	710	2200
MONTH	11100	390	5710	1610	150	269	390	110	192	4670	200	890

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4860	870	2560	8230	2170	4810	8990	3150	5730	6590	2670	4560
2	5180	840	2680	8140	2320	4850	7430	2900	5030	6210	2650	4410
3	5380	790	2630	8330	2440	4930	7480	2920	5110	6140	2590	4290
4	5870	1020	2930	8130	2610	5090	7260	2920	5080	6140	2860	4410
5	5260	1110	3080	7880	2610	5090	7080	2910	4880	6150	3090	4510
6	5600	1460	3550	7760	3010	5500	6960	3040	4770	6320	2940	4360
7	5630	1550	3610	7870	3200	5550	6760	3000	4680	6450	2880	4310
8	5210	1660	3620	8090	3520	5680	6820	3110	4710	7090	2870	4480
9	5280	1800	3540	8240	3430	5530	6730	2750	4580	7400	3130	4730
10	4990	1310	3130	8520	3420	5550	6680	3100	4600	7350	2990	4810
11	5130	1410	3300	8680	3490	5690	7010	2760	4460	6880	2720	4590
12	6360	1450	3280	7270	2970	5210	6880	2770	4450	7500	3000	4940
13	7360	1510	3360	6070	2570	4350	7340	2660	4430	8300	3170	5390
14	6730	1470	3450	5960	2360	4000	7120	2410	4300	8040	2830	5310
15	6460	1560	3570	7120	2330	4020	6350	2150	3940	7170	2920	4940
16	6640	1610	3820	6740	2460	4210	6390	2320	4250	7870	3300	5370
17	7510	1930	4230	6740	2440	4250	6930	2140	4310	7870	3340	5490
18	8120	2090	4370	6570	2470	4300	6120	2130	4020	8210	3420	5520
19	8360	2180	4560	6370	2420	4390	6270	2230	4140	8060	3540	5620
20	7860	2370	4800	6400	2680	4470	6940	2430	4490	7900	3290	5310
21	7730	2390	4710	6870	2710	4670	7700	2570	4760	7680	3440	5400
22	7360	2350	4730	6350	2510	4570	6580	2720	4680	7990	3530	5500
23	7170	2380	4740	6940	2770	4730	6410	2320	4100	7760	3180	5210
24	7250	2510	4940	7500	2990	4960	6310	2490	4230	7410	2690	4940
25	8030	2720	4930	6[illegible]30	3110	4970	7170	2200	3930	7390	2720	5010
26	8010	2450	4850	6490	2610	4400	6880	2170	3980	7130	2370	4700
27	8970	2580	5020	7050	2880	4550	6890	2210	4110	6020	1180	3290
28	9450	2690	5170	7790	2960	4690	7810	2200	4200	4440	560	2090
29	7800	2140	4770	7300	3010	4920	6810	2140	4210	2870	460	1440
30	8150	2110	4620	8690	3160	5310	6440	2360	4320	2630	500	1350
31	---	---	---	8970	3220	5510	6540	2520	4480	---	---	---
MONTH	9450	790	3950	8970	2170	4860	8990	2130	4480	8300	460	4540

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

PH (UNITS). WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOHER			NOVEMBER			DECEMBER			JANUARY		
1	7.0	6.7	6.9	---	---	---	7.0	6.8	6.9	7.2	7.0	7.1
2	7.0	6.8	6.9	---	---	---	7.0	6.8	6.9	7.3	7.0	7.2
3	7.0	6.8	6.9	6.8	6.7	6.7	7.0	6.8	6.9	7.4	7.2	7.3
4	7.0	6.8	6.9	6.7	6.6	6.7	7.1	6.8	6.9	7.4	7.1	7.3
5	6.9	6.8	6.9	6.7	6.6	6.7	7.0	6.8	6.9	7.4	7.1	7.3
6	6.9	6.7	6.8	6.7	6.6	6.7	7.1	6.8	6.9	7.4	7.1	7.2
7	6.9	6.7	6.8	6.7	6.6	6.7	7.1	6.8	7.0	7.4	7.1	7.2
8	6.8	6.6	6.7	6.7	6.6	6.7	7.0	6.7	6.9	7.3	7.0	7.2
9	7.2	6.6	6.8	6.8	6.7	6.7	7.0	6.7	6.8	7.4	7.1	7.2
10	6.9	6.7	6.8	6.8	6.7	6.8	7.0	6.7	6.9	7.4	7.2	7.3
11	6.8	6.6	6.7	6.8	6.6	6.7	6.9	6.7	6.8	7.3	7.0	7.2
12	6.7	6.6	6.7	6.8	6.7	6.7	6.9	6.7	6.8	7.2	7.0	7.1
13	6.7	6.6	6.7	6.8	6.7	6.7	6.9	6.7	6.8	7.3	7.0	7.1
14	6.8	6.7	6.7	6.8	6.7	6.8	7.0	6.7	6.8	7.4	7.1	7.2
15	6.8	6.7	6.8	6.8	6.7	6.7	7.0	6.8	6.9	7.3	7.0	7.2
16	6.8	6.8	6.8	6.9	6.7	6.8	7.0	6.8	6.9	7.3	7.0	7.2
17	6.8	6.8	6.8	6.9	6.7	6.8	7.0	6.8	6.9	7.2	6.9	7.1
18	6.8	6.8	6.8	6.9	6.8	6.9	7.0	6.8	6.9	7.2	6.9	7.1
19	6.9	6.8	6.8	7.0	6.8	6.9	7.0	6.8	6.9	7.1	6.9	7.0
20	6.9	6.8	6.8	7.0	6.8	6.9	7.0	6.9	6.9	7.2	7.0	7.1
21	6.9	6.7	6.8	7.0	6.8	6.9	7.0	6.9	6.9	7.2	7.0	7.1
22	6.9	6.6	6.8	7.0	6.8	6.9	7.2	6.9	7.0	7.2	6.9	7.1
23	6.8	6.6	6.7	7.0	6.7	6.9	7.3	7.0	7.1	7.2	6.9	7.1
24	6.8	6.6	6.7	7.0	6.8	6.9	7.3	7.0	7.1	7.3	7.0	7.1
25	6.7	6.5	6.6	7.1	6.8	6.9	7.3	7.0	7.2	7.3	7.0	7.1
26	6.7	6.6	6.6	7.0	6.8	6.9	7.3	7.1	7.2	7.2	7.0	7.1
27	6.7	6.5	6.6	7.0	6.8	6.9	7.3	7.0	7.2	7.2	7.0	7.1
28	6.7	6.5	6.6	7.0	6.8	6.9	7.3	7.1	7.2	7.2	7.0	7.1
29	6.7	6.6	6.6	7.0	6.8	6.9	7.3	7.1	7.2	7.1	6.9	7.0
30	6.7	6.6	6.6	6.9	6.8	6.8	7.3	7.0	7.2	7.0	6.9	7.0
31	---	---	---	---	---	---	7.2	7.0	7.1	7.1	6.9	7.0
MONTH	7.2	6.5	6.8	7.1	6.6	6.8	7.3	6.7	7.0	7.4	6.9	7.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MA	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.0	6.8	6.9	6.8	6.7	6.8	6.9	6.8	6.8	6.8	6.7	6.7
2	7.1	6.9	7.0	6.8	6.8	6.8	6.9	6.8	6.8	6.8	6.7	6.7
3	7.2	6.9	7.0	---	---	---	6.9	6.8	6.8	6.7	6.7	6.7
4	7.3	6.9	7.1	---	---	---	6.9	6.9	6.9	6.7	6.6	6.7
5	7.3	7.0	7.1	---	---	---	7.0	6.9	6.9	6.7	6.6	6.6
6	7.2	6.9	7.0	---	---	---	7.0	6.8	6.9	6.8	6.6	6.7
7	7.2	6.9	7.1	6.7	6.7	6.7	7.0	6.9	7.0	6.8	6.7	6.8
8	7.2	6.9	7.1	6.7	6.7	6.7	7.0	6.9	7.0	6.8	6.7	6.8
9	7.3	7.0	7.1	6.8	6.7	6.7	7.0	6.9	6.9	6.9	6.7	6.8
10	7.3	7.0	7.1	6.8	6.7	6.7	7.0	6.8	6.9	7.0	6.8	6.9
11	7.2	6.9	7.1	6.8	6.7	6.7	6.9	6.8	6.9	7.0	6.8	6.9
12	7.2	7.0	7.1	6.8	6.7	6.7	6.9	6.8	6.8	7.0	6.8	6.9
13	7.2	6.9	7.1	6.8	6.7	6.8	6.9	6.8	6.8	7.0	6.8	6.9
14	7.2	6.9	7.0	6.8	6.6	6.7	6.9	6.8	6.9	7.0	6.8	6.9
15	7.2	6.9	7.0	6.7	6.5	6.0	6.9	6.8	6.9	7.0	6.8	6.9
16	7.1	6.8	7.0	6.8	6.6	6.7	6.9	6.8	6.9	7.0	6.8	6.9
17	7.1	6.8	6.9	6.8	6.7	6.8	6.9	6.8	6.9	7.0	6.8	6.9
18	7.1	6.8	6.9	6.8	6.7	6.8	6.9	6.8	6.9	7.0	6.8	6.9
19	7.1	6.1	6.9	6.8	6.7	6.8	6.9	6.8	6.8	7.0	6.8	6.9
20	7.1	6.8	6.9	6.9	6.6	6.7	6.9	6.8	6.8	7.0	6.8	6.9
21	7.1	6.8	7.0	6.8	6.6	6.7	6.9	6.7	6.8	6.9	6.8	6.9
22	7.1	6.8	7.0	6.8	6.6	6.7	6.8	6.6	6.8	6.9	6.7	6.8
23	7.1	6.8	7.0	6.8	6.7	6.7	6.8	6.7	6.8	6.9	6.7	6.8
24	7.2	6.9	7.0	6.9	6.7	6.8	6.9	6.8	6.8	6.9	6.7	6.8
25	7.1	6.8	6.9	---	---	---	6.9	6.8	6.8	6.9	6.6	6.8
26	6.9	6.7	6.8	---	---	---	6.8	6.7	6.8	6.9	6.6	6.8
27	6.9	6.7	6.8	---	---	---	6.8	6.6	6.7	6.9	6.6	6.8
28	6.8	6.7	6.7	---	---	---	6.8	6.6	6.7	6.9	6.6	6.7
29	---	---	---	---	---	---	6.8	6.6	6.7	7.0	6.6	6.8
30	---	---	---	---	---	---	6.8	6.6	6.7	7.0	6.7	6.8
31	---	---	---	---	---	---	---	---	---	6.9	6.7	6.8
MONTH	7.3	6.1	7.0	6.9	6.5	6.7	7.0	6.6	6.8	7.0	6.6	6.8

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

PH (UNITS). WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.9	6.7	6.8	7.0	6.6	6.8	7.1	6.9	7.0	7.0	6.8	6.9
2	7.0	6.7	6.8	7.0	6.7	6.8	7.1	6.8	6.9	7.0	6.7	6.9
3	7.0	6.7	6.8	7.0	6.7	6.8	7.0	6.8	6.9	7.0	6.7	6.9
4	7.0	6.7	6.9	6.9	5.6	6.8	7.0	6.8	6.9	7.0	6.7	6.9
5	7.0	6.7	6.9	6.9	6.6	6.8	7.0	6.8	6.9	7.0	6.8	6.9
6	7.0	6.7	6.9	6.9	6.6	6.8	7.0	6.8	6.9	7.0	6.8	6.9
7	7.1	6.8	6.9	6.9	6.6	6.8	7.0	6.8	6.9	7.0	6.7	6.9
8	7.1	6.8	7.0	6.9	6.7	6.8	7.0	6.8	6.9	7.0	6.8	6.9
9	7.2	6.9	7.0	6.9	6.6	6.8	7.0	6.8	6.9	7.2	6.8	7.0
10	7.2	6.8	7.0	6.9	6.7	6.8	6.9	6.8	6.9	7.2	6.8	7.0
11	7.2	6.9	7.0	6.9	6.7	6.8	6.9	6.7	6.8	7.1	6.8	7.0
12	7.2	6.9	7.0	6.9	6.7	6.8	6.9	6.7	6.8	7.2	6.9	7.0
13	7.2	6.8	7.0	6.9	6.7	6.8	6.9	6.7	6.8	7.2	6.9	7.1
14	7.2	6.8	7.0	6.9	6.7	6.8	6.9	6.7	6.8	7.3	6.9	7.1
15	7.1	6.7	6.9	7.0	6.7	6.8	6.9	6.7	6.8	7.2	6.9	7.1
16	7.1	6.7	6.9	7.0	6.7	6.8	6.9	6.7	6.8	7.3	6.9	7.1
17	7.1	6.7	6.9	6.9	6.7	6.8	6.9	6.7	6.8	7.2	6.9	7.1
18	7.1	6.7	6.9	6.9	6.6	6.8	6.9	6.7	6.8	7.2	6.9	7.1
19	7.1	6.7	6.9	6.9	6.7	6.8	6.9	6.7	6.8	7.2	6.9	7.1
20	7.1	6.7	6.9	6.9	6.7	6.8	6.9	6.7	6.8	7.2	6.8	7.0
21	7.0	6.7	6.9	6.9	6.7	6.8	6.9	6.7	6.8	7.1	6.9	7.0
22	7.0	6.7	6.8	7.0	6.7	6.9	7.0	6.7	6.9	7.1	6.8	7.0
23	7.1	6.7	6.9	7.1	6.8	6.9	7.1	6.7	6.9	7.1	6.8	6.9
24	7.1	6.7	6.9	7.1	6.8	7.0	7.1	6.8	6.9	7.1	6.7	6.9
25	7.1	6.7	6.9	7.1	6.9	7.0	7.2	6.8	6.9	7.1	6.8	7.0
26	7.1	6.7	6.9	7.2	6.9	7.0	7.1	6.8	6.9	7.1	6.8	7.0
27	7.1	6.7	6.9	7.2	6.9	7.0	7.1	6.8	6.9	7.0	6.6	6.8
28	7.1	6.7	6.8	7.2	6.9	7.0	7.1	6.8	6.9	6.9	6.4	6.6
29	7.0	6.7	6.8	7.2	6.9	7.0	7.1	6.8	6.9	6.7	6.4	6.6
30	7.0	6.7	6.8	7.2	6.9	7.0	7.1	6.8	6.9	6.7	6.4	6.6
31	---	---	---	7.1	6.9	7.0	7.0	6.8	6.9	---	---	---
MONTH	7.2	6.7	6.9	7.2	6.6	6.9	7.2	6.7	6.9	7.3	6.4	6.9

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.5	19.0	---	---	---	6.0	4.5	5.0	1.5	0.5	1.0
2	19.0	18.0	18.5	---	---	---	5.5	4.5	5.0	1.5	0.5	1.0
3	19.0	18.0	18.5	9.5	9.5	9.5	5.0	4.0	4.5	1.0	0.5	0.5
4	18.5	18.0	18.5	9.5	9.5	9.5	4.5	3.5	4.0	1.0	0.5	0.5
5	18.5	18.0	18.0	9.5	9.0	9.5	4.5	3.5	4.0	1.0	0.0	0.5
6	18.5	18.0	18.0	9.0	9.0	9.0	4.5	3.0	4.0	1.0	0.5	0.5
7	19.0	18.0	18.5	9.0	8.5	9.0	5.0	3.5	4.0	1.0	0.5	0.5
8	19.0	18.5	18.5	8.5	8.0	8.5	5.0	3.5	4.5	0.5	0.5	0.5
9	19.0	18.5	18.5	8.0	7.0	8.0	5.0	4.0	4.5	0.5	0.0	0.5
10	18.5	18.0	18.5	8.5	7.5	8.0	5.0	4.0	4.5	0.5	0.0	0.5
11	18.0	18.0	18.0	8.0	7.5	8.0	5.0	4.5	4.5	0.5	0.0	0.5
12	18.0	17.0	17.5	8.0	7.0	7.5	5.0	4.0	4.5	0.5	0.0	0.5
13	17.0	17.0	17.0	7.5	7.0	7.0	5.0	4.5	4.5	1.0	0.0	0.5
14	17.0	16.5	17.0	7.5	6.5	7.0	4.5	3.5	4.0	1.0	0.5	0.5
15	16.5	16.0	16.5	7.0	6.5	7.0	4.5	3.5	4.0	1.0	0.5	1.0
16	16.5	16.5	16.5	7.0	6.0	6.5	4.5	3.5	4.0	1.0	0.5	0.5
17	16.0	15.0	15.5	7.0	6.0	6.5	4.5	3.0	4.0	0.5	0.5	0.5
18	15.5	15.0	15.0	7.0	6.0	6.5	4.5	3.5	4.0	1.0	0.5	0.5
19	15.0	14.5	15.0	7.5	6.0	6.5	4.5	3.5	4.0	1.0	0.5	0.5
20	15.0	14.0	14.5	7.0	6.0	6.5	4.5	3.5	4.0	1.0	0.5	0.5
21	14.5	14.0	14.5	7.0	6.0	6.5	4.5	4.0	4.0	1.0	0.5	1.0
22	14.0	13.5	13.5	7.0	5.5	6.5	4.0	2.0	3.5	1.0	0.5	0.5
23	13.5	13.0	13.0	6.5	5.5	6.0	3.5	2.0	3.0	1.0	0.5	1.0
24	13.0	12.0	12.5	6.0	5.0	5.5	3.5	1.5	2.5	1.0	0.5	1.0
25	13.0	12.0	12.5	6.0	5.0	5.5	3.0	1.5	2.0	1.0	0.5	1.0
26	12.5	11.5	12.0	6.0	5.0	5.5	3.0	1.5	2.0	1.0	0.5	1.0
27	11.5	11.0	11.5	6.0	5.0	5.5	3.0	1.5	2.0	1.0	0.5	1.0
28	11.5	10.5	11.0	6.0	5.5	6.0	2.5	1.5	1.5	1.0	0.5	1.0
29	11.0	10.5	10.5	6.5	5.5	6.0	2.5	1.0	1.5	0.5	0.5	0.5
30	10.5	10.0	10.5	6.0	5.0	5.5	2.5	1.0	1.5	1.0	0.5	0.5
31	---	---	---	---	---	---	2.0	1.0	1.5	1.0	0.5	0.5
MONTH	19.5	10.0	15.5	9.5	5.0	7.0	6.0	1.0	3.5	1.5	0.0	0.5

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	0.5	1.0	5.5	5.0	5.5	10.0	9.5	9.5	18.0	17.0	17.0
2	1.0	0.5	1.0	5.5	5.0	5.5	10.0	9.5	9.5	18.0	17.0	17.5
3	1.0	0.5	1.0	---	---	---	11.0	9.5	10.5	18.5	17.5	18.0
4	1.0	0.5	1.0	---	---	---	11.5	10.0	10.5	18.0	17.5	18.0
5	1.0	0.5	1.0	---	---	---	12.0	10.0	11.0	18.5	17.5	18.0
6	1.0	0.5	0.5	---	---	---	11.5	10.5	11.0	19.0	18.0	18.5
7	1.0	0.5	0.5	7.5	7.0	7.0	11.0	9.5	10.5	19.0	18.5	18.5
8	1.0	0.5	1.0	7.5	6.5	7.0	10.5	9.5	10.0	19.0	18.5	18.5
9	1.0	0.5	1.0	7.5	7.0	7.0	10.0	9.5	9.5	18.5	17.0	18.0
10	1.0	0.5	1.0	8.0	7.0	7.5	10.0	9.5	9.5	17.0	16.5	16.5
11	1.5	1.0	1.0	8.5	7.5	8.0	11.0	9.5	10.0	17.0	16.0	16.5
12	1.5	1.0	1.5	8.5	7.5	8.0	11.5	10.0	11.0	17.5	16.5	17.0
13	1.5	1.0	1.5	9.0	8.0	8.5	12.0	11.0	11.5	18.0	17.0	17.5
14	2.5	1.5	1.5	9.5	8.5	9.0	12.5	11.5	12.0	18.0	17.0	17.5
15	2.5	1.5	2.0	10.0	8.5	9.5	12.5	11.5	12.0	18.5	17.5	18.0
16	2.5	1.5	2.0	11.0	9.5	10.0	13.0	12.0	12.5	18.5	18.0	18.0
17	2.0	1.5	1.5	11.0	10.0	10.5	13.5	12.5	13.0	19.0	18.0	18.5
18	2.0	1.5	1.5	10.5	10.0	10.5	14.0	13.0	13.5	20.0	19.0	19.5
19	2.0	1.5	1.5	10.5	9.0	9.5	14.0	13.5	14.0	20.0	19.5	20.0
20	2.0	1.5	2.0	9.5	9.0	9.5	14.5	13.5	14.0	21.0	20.0	20.0
21	2.0	1.5	2.0	9.5	8.5	9.0	15.0	14.0	14.5	21.5	20.5	21.0
22	3.0	1.5	2.0	9.0	8.5	9.0	16.0	14.5	15.0	22.0	21.0	21.5
23	3.5	2.0	2.5	8.5	8.0	8.5	16.5	15.5	16.0	22.5	21.5	22.0
24	3.5	2.0	3.0	8.0	8.0	8.0	16.5	16.0	16.0	23.0	22.0	22.5
25	4.5	3.0	3.5	---	---	---	17.0	16.0	16.5	23.0	22.5	22.5
26	5.0	4.0	4.5	---	---	---	17.0	16.0	16.5	23.5	22.5	23.0
27	5.5	4.0	5.0	---	---	---	17.0	16.0	16.5	24.0	23.0	23.5
28	6.0	5.0	5.5	---	---	---	17.5	16.5	16.5	24.0	23.0	23.5
29	---	---	---	---	---	---	17.0	16.0	16.5	24.0	23.5	23.5
30	---	---	---	---	---	---	17.5	16.5	17.0	23.5	23.0	23.0
31	---	---	---	---	---	---	---	---	---	23.5	22.5	23.0
MONTH	6.0	0.5	2.0	11.0	5.0	8.5	17.5	9.5	13.0	24.0	16.0	19.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.0	22.5	23.0	26.5	26.0	26.0	27.5	27.0	27.5	28.5	27.0	28.0
2	23.5	22.5	23.0	26.5	26.0	26.0	28.0	27.0	27.5	28.5	27.5	28.0
3	23.5	23.0	23.0	27.0	25.5	26.0	28.0	27.0	27.5	28.5	28.0	28.5
4	23.5	22.5	23.0	26.5	26.0	26.5	28.0	27.0	27.5	28.5	28.0	28.0
5	23.0	22.5	23.0	27.5	26.5	26.5	28.5	27.5	28.0	28.5	28.0	28.0
6	23.0	22.0	22.5	27.5	27.0	27.0	29.0	28.0	28.5	28.5	28.0	28.0
7	22.5	21.5	22.0	27.5	27.0	27.0	29.0	28.5	29.0	28.5	27.5	28.0
8	22.0	21.0	21.5	28.0	27.0	27.0	29.5	28.5	29.0	28.0	27.0	27.5
9	21.5	21.0	21.0	28.0	27.5	27.5	29.5	29.0	29.0	27.5	26.0	27.0
10	21.0	20.5	21.0	28.0	27.5	27.5	29.5	29.0	29.0	27.0	26.0	26.5
11	21.0	20.0	20.5	27.5	27.5	27.5	29.5	29.0	29.0	26.5	25.5	26.0
12	21.5	20.5	21.0	28.0	27.5	27.5	29.5	29.0	29.5	26.0	25.0	25.5
13	22.0	21.0	21.5	28.5	27.5	28.0	29.5	29.0	29.0	25.5	25.0	25.0
14	22.5	21.5	22.0	28.5	28.0	28.0	29.0	28.5	29.0	25.0	24.5	25.0
15	22.5	21.5	22.0	29.0	28.0	28.5	29.0	28.5	28.5	24.5	24.0	24.5
16	23.0	22.0	22.5	29.5	28.5	29.0	29.0	28.5	28.5	24.5	23.5	24.0
17	23.5	22.5	22.5	30.0	29.0	29.5	29.0	28.5	28.5	24.5	23.5	24.0
18	24.0	22.5	23.5	30.5	29.0	29.5	28.5	28.0	28.0	25.0	24.0	24.5
19	24.5	23.5	24.0	30.5	29.5	30.0	28.0	27.5	27.5	25.5	24.5	25.0
20	24.5	24.0	24.0	30.0	30.0	30.0	28.0	27.0	27.5	25.5	24.5	25.0
21	24.5	24.0	24.0	30.5	30.0	30.0	27.5	26.5	27.0	25.0	24.5	24.5
22	24.5	24.0	24.0	30.5	30.0	30.0	27.5	26.5	27.0	24.5	24.0	24.5
23	24.5	24.0	24.0	30.0	28.5	29.5	27.0	26.5	27.0	24.5	24.0	24.0
24	25.0	24.0	24.5	29.5	28.5	29.0	27.0	26.5	27.0	24.5	23.5	24.0
25	24.5	24.5	24.5	29.0	28.0	28.5	27.0	26.0	26.5	24.0	23.0	23.5
26	25.5	24.5	24.5	28.5	27.5	28.0	27.0	26.0	26.5	23.5	23.0	23.0
27	25.5	24.5	25.0	28.0	27.0	27.5	27.0	26.0	26.5	23.5	23.0	23.5
28	26.0	25.0	25.5	28.0	27.0	27.5	27.0	26.0	26.5	23.5	23.0	23.0
29	26.0	25.5	25.5	28.0	27.0	27.5	27.5	26.5	27.0	23.0	22.5	23.0
30	26.0	25.5	26.0	27.5	26.5	27.0	28.0	27.0	27.5	23.0	22.5	22.5
31	---	---	---	27.5	26.5	27.0	28.0	27.0	27.5	---	---	---
MONTH	26.0	20.0	23.0	30.5	25.5	28.0	29.5	26.0	28.0	28.5	22.5	25.5

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.4	3.8	4.7	---	---	---	8.7	6.7	7.7	10.4	9.0	9.7
2	5.6	4.6	5.1	---	---	---	8.9	7.4	8.1	11.0	9.3	10.2
3	5.6	4.3	5.1	7.4	6.7	7.1	8.8	6.8	7.9	11.6	9.6	10.5
4	5.8	4.6	5.2	7.1	6.4	6.9	9.4	7.3	8.1	11.5	9.6	10.5
5	5.9	4.7	5.5	7.2	6.5	6.8	8.9	6.9	7.8	11.3	9.7	10.5
6	5.9	4.5	5.2	7.4	6.8	7.1	9.2	6.9	7.9	11.4	9.7	10.6
7	---	---	---	7.6	6.9	7.3	9.3	6.8	8.1	11.4	9.6	10.7
8	---	---	---	7.9	7.2	7.6	9.4	7.0	8.0	11.3	9.7	10.5
9	---	---	---	8.7	7.4	7.9	9.1	6.7	8.0	11.5	9.9	10.8
10	---	---	---	8.1	7.2	7.6	9.2	7.0	8.1	11.5	10.3	11.0
11	---	---	---	8.0	7.1	7.6	8.5	6.8	7.7	11.4	10.0	10.7
12	---	---	---	7.9	6.9	7.5	8.4	6.8	7.5	11.1	9.5	10.3
13	---	---	---	7.8	7.0	7.4	8.2	6.7	7.4	11.8	10.2	10.9
14	---	---	---	7.9	7.1	7.5	10.1	7.0	8.3	12.1	10.4	11.1
15	---	---	---	7.9	7.0	7.4	9.9	7.7	8.8	11.7	10.2	11.0
16	---	---	---	7.8	6.8	7.3	9.8	7.7	8.7	11.6	10.0	10.8
17	---	---	---	7.6	6.7	7.1	10.0	7.5	8.7	11.3	9.6	10.6
18	5.7	5.1	5.4	7.5	6.7	7.2	9.3	7.4	8.4	11.2	9.7	10.5
19	5.7	4.9	5.3	7.9	6.5	7.1	9.4	7.5	8.2	11.1	9.6	10.4
20	6.2	4.9	5.2	7.7	6.3	7.0	9.5	7.5	8.3	11.5	9.7	10.6
21	6.4	5.0	5.5	7.5	6.0	6.8	8.9	7.4	8.2	11.3	9.5	10.4
22	6.1	5.3	5.7	8.1	6.5	7.2	11.1	8.3	9.3	11.1	9.3	10.2
23	6.2	5.4	5.8	8.4	6.6	7.4	11.9	9.3	10.2	11.5	9.4	10.4
24	6.2	5.5	5.8	8.6	6.8	7.6	11.3	9.1	10.3	11.5	9.6	10.6
25	6.1	5.2	5.7	8.6	6.8	7.6	11.9	9.6	10.7	11.3	9.5	10.4
26	6.2	5.4	5.8	8.2	6.6	7.5	11.4	9.6	10.6	11.1	9.3	10.2
27	6.6	5.5	6.1	8.1	6.7	7.4	11.4	9.6	10.6	11.0	9.0	10.1
28	6.3	5.5	5.9	8.0	6.6	7.3	11.6	9.3	10.9	11.2	9.0	10.2
29	6.2	5.6	6.0	7.8	6.4	7.1	11.2	9.3	10.3	10.6	8.3	9.8
30	6.0	5.7	5.9	7.7	6.5	7.1	10.8	8.7	9.7	10.4	8.8	9.7
31	---	---	---	---	---	---	10.2	8.7	9.5	10.7	8.6	9.8
MONTH	6.6	3.8	5.5	8.7	6.0	7.3	11.9	6.7	8.8	12.1	8.3	10.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.5	8.5	9.7	6.5	5.7	6.0	8.9	8.7	8.8	6.5	2.7	4.5
2	11.1	8.7	9.8	7.1	6.0	6.5	8.9	8.4	8.6	6.4	3.2	4.8
3	11.6	9.1	10.3	---	---	---	8.8	8.2	8.4	6.0	3.4	4.7
4	11.5	8.8	10.2	---	---	---	8.5	7.9	8.2	6.1	3.6	4.8
5	11.6	8.9	10.4	---	---	---	8.6	7.7	8.1	5.8	3.6	4.6
6	11.3	7.1	9.9	---	---	---	9.3	7.9	8.6	5.2	3.5	4.5
7	11.6	9.1	10.4	9.1	7.7	8.2	9.4	8.7	9.1	5.2	3.6	4.3
8	11.6	9.2	10.5	9.7	8.0	8.6	9.5	9.1	9.3	5.0	3.7	4.3
9	11.7	9.1	10.5	10.0	8.1	8.8	9.5	9.1	9.3	6.4	4.3	5.0
10	11.4	9.0	10.3	9.9	8.2	9.0	9.4	8.8	9.1	7.2	5.2	6.4
11	11.2	8.7	10.1	9.7	8.4	9.0	9.1	8.6	8.8	7.4	5.9	6.7
12	10.9	8.6	9.8	9.5	8.6	9.0	8.8	8.4	8.6	7.4	5.8	6.5
13	11.0	8.3	9.8	9.2	8.7	9.0	8.5	8.2	8.3	7.2	5.8	6.5
14	10.9	8.1	9.7	9.1	8.1	8.7	8.3	8.0	8.1	7.3	5.9	6.6
15	10.7	7.6	9.3	8.6	7.8	8.1	8.2	7.8	8.1	7.6	5.9	6.6
16	10.6	7.0	8.9	9.0	8.0	8.5	8.1	7.4	7.8	7.3	6.0	6.6
17	10.6	7.1	9.0	9.0	8.7	8.8	7.9	7.1	7.6	7.1	6.3	6.6
18	10.8	7.3	9.1	9.0	8.6	8.7	7.9	6.7	7.3	6.9	6.2	6.5
19	10.7	7.4	9.2	9.0	8.6	8.9	7.4	6.4	7.0	6.8	6.0	6.3
20	10.6	7.4	9.1	9.1	8.7	8.8	7.3	6.1	6.8	6.6	5.7	6.1
21	10.6	7.4	9.2	8.9	8.7	8.8	7.0	5.6	6.5	6.3	5.5	5.8
22	10.8	8.0	9.4	9.1	8.6	8.8	6.7	5.2	6.2	6.4	5.0	5.5
23	10.4	7.8	9.2	9.6	8.9	9.2	6.6	5.2	6.0	5.8	4.5	5.1
24	11.2	8.2	9.8	9.5	9.2	9.4	6.8	5.5	6.2	5.5	4.0	4.7
25	10.5	5.9	8.9	---	---	---	6.9	5.4	6.2	5.3	3.3	4.3
26	8.7	5.5	7.0	---	---	---	6.6	5.0	6.0	5.3	3.0	4.2
27	7.8	5.2	6.3	---	---	---	6.1	3.7	5.3	5.1	2.6	4.0
28	6.5	5.4	5.9	---	---	---	6.0	3.2	5.0	5.3	2.5	3.8
29	---	---	---	---	---	---	5.9	2.8	4.5	6.0	2.8	4.2
30	---	---	---	---	---	---	6.3	2.8	4.5	5.4	3.5	4.5
31	---	---	---	---	---	---	---	---	---	5.5	3.1	4.1
MONTH	11.7	5.2	9.3	10.0	5.7	8.5	9.5	2.8	7.4	7.6	2.5	5.3

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.4	2.9	4.2	5.4	2.0	3.8	5.5	3.2	4.6	5.1	2.8	4.2
2	5.6	2.9	4.2	5.3	1.8	3.7	5.0	2.6	4.1	5.3	2.8	4.1
3	5.5	2.7	4.2	5.1	2.0	3.7	4.7	2.5	3.9	5.1	2.5	4.0
4	6.0	2.9	4.6	4.9	2.0	3.7	4.5	2.2	3.7	5.5	2.8	4.2
5	5.8	3.1	4.7	4.6	1.7	3.4	4.5	2.3	3.6	5.4	3.1	4.3
6	5.9	3.4	4.9	4.6	1.8	3.5	4.5	2.4	3.6	5.2	2.9	4.1
7	6.3	3.6	5.2	4.2	1.9	3.4	4.6	2.3	3.5	5.5	2.7	4.2
8	6.8	4.1	5.7	4.5	2.1	3.4	4.5	2.6	3.6	5.8	3.4	4.6
9	7.1	4.8	6.1	4.3	1.9	3.2	4.4	2.5	3.5	6.4	3.5	4.9
10	7.1	4.4	5.9	4.5	1.9	3.4	4.4	2.5	3.5	6.3	4.0	5.2
11	7.4	5.1	6.4	4.7	2.5	3.6	4.4	2.4	3.4	6.1	3.7	5.1
12	7.4	5.0	6.4	4.7	2.6	3.7	4.3	2.0	3.3	6.2	4.1	5.4
13	7.4	4.7	6.1	4.4	2.5	3.7	4.4	2.2	3.3	6.6	4.5	5.8
14	7.1	4.2	5.7	4.5	2.2	3.5	4.1	2.1	3.2	6.8	4.8	6.1
15	6.8	3.6	5.2	5.0	2.3	3.6	3.9	1.9	3.1	6.8	4.6	6.0
16	6.4	3.1	4.9	4.7	2.2	3.6	4.2	2.1	3.4	7.4	5.4	6.3
17	6.5	3.0	5.0	4.9	2.2	3.7	4.5	2.4	3.7	7.1	5.0	6.4
18	6.6	2.9	4.9	4.6	2.1	3.6	4.2	2.0	3.4	7.0	4.8	6.2
19	6.4	2.7	4.6	4.6	1.9	3.5	4.5	2.1	3.4	6.8	4.7	6.0
20	6.1	2.7	4.6	4.4	1.9	3.4	4.2	2.1	3.4	6.6	4.2	5.7
21	5.9	2.8	4.6	4.6	1.9	3.4	4.5	2.3	3.6	6.7	4.5	5.8
22	5.9	3.0	4.7	5.0	2.3	3.8	5.0	2.9	4.1	6.6	4.4	5.7
23	6.5	3.2	4.9	5.7	3.1	4.4	5.8	2.5	4.0	6.3	3.5	5.2
24	6.3	3.1	5.0	5.7	3.5	4.7	5.5	3.1	4.4	6.3	2.9	5.0
25	6.1	3.4	4.9	5.8	4.3	5.0	6.1	2.7	4.3	6.8	4.1	5.6
26	6.0	2.7	4.5	5.9	3.8	4.9	6.1	2.8	4.4	6.8	4.4	5.8
27	6.0	2.6	4.3	5.9	4.0	5.0	6.1	2.8	4.6	6.5	2.4	4.8
28	6.0	2.4	4.2	6.1	3.9	5.0	6.2	2.9	4.6	5.6	1.3	3.4
29	5.4	1.9	3.8	6.0	3.6	4.9	5.7	2.8	4.5	4.4	1.1	2.7
30	5.5	2.0	3.8	6.1	3.3	4.7	5.5	2.9	4.5	4.3	1.1	2.6
31	---	---	---	5.7	3.1	4.6	5.3	2.7	4.3	---	---	---
MONTH	7.4	1.9	4.9	6.1	1.7	3.9	6.2	1.9	3.8	7.4	1.1	5.0

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

LOCATION.--Lat 39°30'03", long 75°34'07", New Castle County, Hydrologic Unit 02040205, water-quality recorder located on platform about 0.4 mi (0.6 km) downstream from Reedy Island near Port Penn.

DRAINAGE AREA.--11,200 mi² (29,100 km²), approximately.

PERIOD OF RECORD.--October 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: February 1970 to current year.
WATER TEMPERATURES: February 1970 to current year.
DISSOLVED OXYGEN: February 1970 to current year.

REMARKS.--Water-quality monitor records less than 80 percent complete for most parameters. Extremes for period of record are those recorded when monitor was in operation.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 35,400 micromhos Nov. 7, 1963; minimum, 100 micromhos on several days during August 1969, April 1970, and February 1974.
pH: Maximum, 8.8 Aug. 29, Sept. 2, 1973; minimum, 5.4 Dec. 31, 1972.
WATER TEMPERATURES: Maximum, 31.5°C July 21, 1977; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 13.7 mg/L Feb. 18, 19, 1973; minimum, 0.3 mg/L Sept. 16, 17, 1971.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 31.5°C July 21.

SPECIFIC CONDUCTANCE (MICROMH[illegible]M AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16600	9760	12400	4440	1800	2840	12400	4000	6950			
2	18400	10800	14100	7200	1920	3940	11800	4440	6600			
3	17000	9880	13600	7640	2200	3930	7920	2160	4520			
4	17900	10100	13500	7200	2280	3670	9400	3600	5040			
5	17000	10000	13800	5800	2160	3550	8840	3200	4660			
6	17600	10000	13100	4600	1960	2830	11200	3920	5980			
7	16200	9920	12400	3120	1200	2000	13200	4720	7390			
8	16300	9640	11900	5200	1160	2250	9800	4000	5890			
9	18700	10200	13100	8960	1760	3860	9160	3640	5060			
10	11300	6080	9050	6600	1400	3200	7960	3200	4480			
11	9360	5360	6990	4800	2800	---	4200	2160	3270			
12	10000	5120	6400	---	---	---	8040	2360	3850			
13	10500	5080	6650	---	---	---	6840	1640	3550			
14	7520	4560	5580	---	---	---	7600	1760	3450			
15	9800	4000	5670	---	---	---	5760	1920	3110			
16	8320	2920	4990	11000	3640	6830	9000	1880	4250			
17	12300	3600	6370	11200	4000	6530	11000	3240	6080			
18	13200	5240	8090	10300	4360	6130	8960	3160	4770			
19	14400	4800	8660	11800	4160	6310	8440	2960	4260			
20	15200	5400	8700	12200	4320	6440	10600	3200	5080			
21	14400	5400	8000	11600	4360	6040	6960	3360	4540			
22	6440	3800	5250	9200	3640	5320	---	---	---			
23	6440	2840	4350	6960	3360	4500	---	---	---			
24	7000	2800	4140	8760	3200	4430	---	---	---			
25	7160	2800	4050	8960	3240	4760	---	---	---			
26	5360	2600	3650	8560	3600	5110	---	---	---			
27	7760	2360	4010	9080	3760	5140	---	---	---			
28	7000	2200	3530	8800	3800	5290	---	---	---			
29	5000	2160	3040	9000	4160	5690	---	---	---			
30	6560	2000	3210	9760	4040	5760	---	---	---			
31	7360	2160	4030	---	---	---	---	---	---			
MONTH	18700	2000	7820	12200	1160	4650	13200	1640	4890			

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14400	5360	10100	4440	200	1940	5640	400	2390
2	---	---	---	13000	3200	7860	4360	200	1650	5000	760	2590
3	---	---	---	12300	2560	6700	2320	200	883	4680	600	2080
4	---	---	---	13400	2960	7260	960	200	387	5400	800	2530
5	---	---	---	10800	2720	6080	1600	200	522	5880	1400	3110
6	---	---	---	7200	1360	3290	1160	440	866	5960	1760	3430
7	---	---	---	4200	720	2080	1200	800	990	5800	1800	3300
8	---	---	---	3000	200	1370	1240	1000	1160	4840	1800	3210
9	---	---	---	2800	200	932	1360	1200	1220	3600	1240	2130
10	---	---	---	2040	200	445	1400	1200	1270	9960	1200	5010
11	---	---	---	1360	200	313	1360	1200	1260	12300	3240	6810
12	---	---	---	1240	200	273	1400	1200	1300	11300	3840	6440
13	---	---	---	3240	200	677	1400	1200	1330	11800	3960	6360
14	---	---	---	960	200	475	1360	400	1200	13400	4000	6680
15	---	---	---	1320	520	958	1600	560	1120	12400	4200	6610
16	---	---	---	1360	1000	1210	1320	200	963	12400	4360	6560
17	---	---	---	1320	1200	1210	3240	280	1060	11700	4000	5650
18	---	---	---	1320	1200	1210	3000	200	775	10000	3720	5360
19	---	---	---	1360	1200	1230	2360	200	648	11100	4080	6120
20	---	---	---	1320	840	1200	2600	200	597	12800	4520	7120
21	---	---	---	1360	1200	1270	2400	200	577	10600	4440	5990
22	---	---	---	1320	560	1180	2200	200	428	8920	4400	5550
23	17600	11600	14200	1400	1200	1340	2280	200	468	8720	4360	5450
24	21800	12000	16500	1400	200	1260	3480	200	1060	8840	4640	5590
25	22000	7600	14700	1760	200	983	4000	200	1720	8520	4560	5800
26	15400	7400	11100	6000	560	3460	5000	280	2690	9800	4520	6070
27	14900	7680	11000	8840	2720	5310	4400	200	1790	10700	4800	6560
28	14200	6600	10300	8560	2960	5440	4600	200	1770	13200	5120	7200
29	---	---	---	8600	2160	4700	4960	200	1880	13600	5200	7300
30	---	---	---	6800	1600	3950	5400	200	2220	14300	5280	8110
31	---	---	---	8040	1400	3750	---	---	---	13400	5480	7830
MONTH	22000	6600	13000	14400	200	2820	5400	200	1190	14300	400	5320

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13800	5520	8050	17600	8400	11400	20400	11000	14300	13800	7520	10300
2	14000	5560	8030	16800	8160	11200	17600	9960	12700	13400	7120	9890
3	14600	5840	8100	17000	8400	11300	17900	10200	12800	12400	6360	8930
4	13800	5960	8630	17400	8720	11800	17400	9800	13100	14600	6960	9820
5	14000	6040	8860	15600	8440	11000	17000	9960	12800	14200	8160	11000
6	14500	6160	9590	15600	8560	11700	17000	9640	12600	13900	8000	10200
7	15000	6920	10800	16000	8960	12000	17600	9200	12600	14200	7520	10100
8	16200	7360	11200	16400	9120	12400	16800	7560	11900	15000	7920	10900
9	15600	7520	10600	16400	9200	12000	15000	7560	11000	15600	8840	11400
10	16200	6960	10200	18000	9560	12500	16000	7360	11400	16000	9000	11700
11	18400	7960	12600	16800	9800	12800	16400	7760	11400	15200	8960	11300
12	18600	7880	12300	15800	10000	12400	17200	7600	11700	16000	9000	11700
13	17900	[illegible]	11800	16000	8040	11100	17400	8040	11600	16200	9640	12300
14	17600	7720	11700	16000	7640	10100	17200	7760	11100	15100	7240	10800
15	17300	8200	11800	16200	7920	10800	15600	7000	9930	14800	7360	9800
16	18000	8520	11900	17000	8400	11400	16000	7520	11100	14800	8160	11000
17	18400	8520	12500	17200	8600	11200	16400	8000	11200	15200	8360	11000
18	18200	9200	12100	16400	7920	11000	15100	7200	10100	15200	8200	11000
19	17100	8880	11800	16400	8160	11500	15200	7400	10500	15000	8560	11100
20	17600	8800	12300	17900	8800	12300	15600	7800	11200	15000	8560	11000
21	17000	8800	11700	17200	9000	12300	16200	8160	11300	15800	8560	11500
22	17400	8880	12200	16700	9000	12100	14800	8440	11100	16000	8960	11800
23	16200	8720	12000	20400	9200	14300	14700	6400	9310	15400	9000	11400
24	17500	9360	12800	20800	10400	14500	14800	7000	10100	14000	8720	10900
25	17100	9680	12400	17100	9400	12500	15800	7000	9550	15200	8840	11200
26	17000	9000	12100	17800	6840	10200	15400	7400	10100	15200	8160	11200
27	18400	9080	12400	19900	8000	11800	14700	7600	10000	12600	6800	9180
28	18600	9760	12600	20000	9360	12800	14800	7240	9690	10300	4960	7340
29	17400	9200	12100	20300	10000	13100	14200	6960	9280	9960	4440	6340
30	17400	8560	11400	20800	10300	13800	13400	6720	9220	10000	4400	6210
31	---	---	---	20800	10700	14300	14600	6960	9820	---	---	---
MONTH	18600	5520	11200	20800	6840	12100	20400	6400	11100	16200	4400	10400

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.6	7.4	7.5	7.2	7.0	7.1	7.7	7.4	7.5			
2	7.6	7.5	7.5	7.4	7.0	7.2	7.7	7.4	7.5			
3	7.6	7.4	7.5	7.4	7.0	7.1	7.6	7.4	7.5			
4	7.6	7.4	7.5	7.3	7.0	7.1	7.6	7.4	7.5			
5	7.6	7.4	7.5	7.3	7.0	7.1	7.6	7.4	7.4			
6	7.6	7.3	7.4	7.2	7.0	7.1	7.6	7.4	7.5			
7	7.5	7.3	7.4	7.3	7.0	7.1	7.7	7.4	7.5			
8	7.4	7.2	7.3	7.3	7.1	7.2	7.6	7.4	7.5			
9	7.5	7.3	7.4	7.5	7.1	7.3	7.6	7.3	7.4			
10	7.5	7.3	7.4	7.4	7.1	7.2	7.5	7.3	7.4			
11	7.5	7.3	7.4	7.3	7.2	7.2	7.4	7.2	7.3			
12	7.4	7.1	7.3	---	---	---	7.5	7.2	7.3			
13	7.4	7.1	7.3	---	---	---	7.5	7.2	7.4			
14	7.6	7.1	7.3	---	---	---	7.6	7.2	7.4			
15	7.4	7.1	7.3	---	---	---	7.5	7.3	7.4			
16	7.5	7.2	7.4	7.6	7.3	7.4	7.6	7.3	7.4			
17	7.5	7.2	7.4	7.6	7.3	7.4	7.6	7.3	7.4			
18	7.6	7.3	7.4	7.6	7.3	7.4	7.6	7.3	7.4			
19	7.6	7.3	7.4	7.6	7.3	7.4	7.5	7.2	7.3			
20	7.6	7.2	7.4	7.6	7.3	7.4	7.6	7.3	7.4			
21	7.6	7.3	7.4	7.6	7.3	7.4	7.5	7.3	7.4			
22	7.6	7.2	7.4	7.5	7.3	7.4	---	---	---			
23	7.5	7.2	7.3	7.5	7.3	7.4	---	---	---			
24	7.3	7.1	7.2	7.6	7.3	7.4	---	---	---			
25	7.3	7.1	7.2	7.6	7.3	7.4	---	---	---			
26	7.3	7.1	7.2	7.6	7.3	7.4	---	---	---			
27	7.5	7.1	7.3	7.6	7.3	7.4	---	---	---			
28	7.4	7.0	7.2	7.5	7.3	7.4	---	---	---			
29	7.3	7.0	7.1	7.6	7.3	7.4	---	---	---			
30	7.3	7.0	7.1	7.6	7.3	7.5	---	---	---			
31	7.3	7.0	7.1	---	---	---	---	---	---			
MONTH	7.6	7.0	7.3	7.6	7.0	7.3	7.7	7.2	7.4			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.5	7.1	7.3	7.2	7.0	7.1	7.1	6.8	6.9
2	---	---	---	7.4	7.1	7.2	7.2	7.0	7.1	7.1	6.8	6.9
3	---	---	---	7.4	7.0	7.2	7.2	6.9	7.1	7.0	6.8	6.9
4	---	---	---	7.4	7.0	7.2	7.1	6.9	7.0	7.1	6.7	6.8
5	---	---	---	7.3	7.0	7.2	7.1	6.9	7.0	7.0	6.7	6.8
6	---	---	---	7.2	6.9	7.0	7.1	6.9	7.0	7.0	6.7	6.8
7	---	---	---	7.1	6.9	7.0	7.1	6.9	7.0	7.0	6.7	6.8
8	---	---	---	7.0	6.9	6.9	7.2	7.0	7.1	6.9	6.7	6.8
9	---	---	---	7.0	6.9	6.9	7.1	7.0	7.0	7.1	6.8	6.9
10	---	---	---	7.0	6.9	6.9	7.1	6.9	7.0	7.5	6.9	7.2
11	---	---	---	6.9	6.9	6.9	7.0	6.9	7.0	7.6	7.1	7.3
12	---	---	---	6.9	6.8	6.9	7.0	6.9	6.9	7.5	7.1	7.3
13	---	---	---	7.1	6.8	7.0	6.9	6.8	6.9	7.5	7.1	7.2
14	---	---	---	7.0	6.8	6.9	7.0	6.8	6.9	7.6	7.1	7.3
15	---	---	---	6.9	6.7	6.8	7.2	6.8	6.9	7.5	7.1	7.2
16	---	---	---	6.8	6.6	6.7	6.9	6.8	6.9	7.5	7.1	7.2
17	---	---	---	6.8	6.6	6.7	7.0	6.8	6.8	7.5	7.0	7.2
18	---	---	---	6.9	6.7	6.8	7.0	6.8	6.9	7.4	7.0	7.2
19	---	---	---	7.1	6.8	7.0	7.0	6.8	6.8	7.5	7.1	7.2
20	---	---	---	7.0	6.9	6.9	6.9	6.8	6.8	7.7	7.1	7.3
21	---	---	---	7.0	6.9	6.9	6.9	6.8	6.8	7.5	7.1	7.2
22	---	---	---	7.1	6.9	7.0	6.9	6.8	6.8	7.4	7.1	7.2
23	7.7	7.5	7.6	7.3	6.8	7.1	6.9	6.8	6.8	7.3	7.0	7.1
24	7.8	7.5	7.6	7.2	6.9	7.1	7.0	6.8	6.9	7.3	7.0	7.1
25	8.6	7.4	7.6	7.2	6.9	7.1	7.0	6.8	6.9	7.3	7.0	7.1
26	7.6	7.3	7.4	7.6	7.1	7.4	7.1	6.8	7.0	7.3	7.0	7.1
27	7.6	7.2	7.4	7.8	7.3	7.5	7.0	6.8	6.9	7.3	7.0	7.1
28	7.4	7.1	7.3	7.7	7.2	7.4	7.1	6.8	6.9	7.3	7.0	7.1
29	---	---	---	7.6	7.1	7.3	7.1	6.8	6.9	7.4	7.0	7.1
30	---	---	---	7.4	7.1	7.2	7.2	6.8	6.9	7.3	7.0	7.2
31	---	---	---	7.5	7.1	7.2	---	---	---	7.2	7.0	7.1
MONTH	8.6	7.1	7.5	7.8	6.6	7.1	7.2	6.8	6.9	7.7	6.7	7.1

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.2	6.9	7.0	7.3	7.1	7.2	7.5	7.2	7.3	7.4	7.2	7.3
2	7.3	6.9	7.1	7.3	7.0	7.1	7.3	7.2	7.3	7.4	7.2	7.3
3	7.4	7.1	7.2	7.2	7.0	7.1	7.3	7.1	7.2	7.4	7.2	7.3
4	7.4	7.1	7.3	7.2	7.0	7.1	7.3	7.1	7.2	7.4	7.2	7.3
5	7.4	7.1	7.2	7.2	7.0	7.1	7.3	7.1	7.2	7.5	7.3	7.4
6	7.4	7.2	7.3	7.3	7.0	7.1	7.3	7.1	7.2	7.5	7.3	7.4
7	7.4	7.2	7.3	7.2	7.0	7.1	7.3	7.1	7.2	7.5	7.3	7.4
8	7.5	7.3	7.4	7.2	7.0	7.1	7.4	7.2	7.3	7.6	7.3	7.4
9	7.5	7.3	7.4	7.2	7.0	7.1	7.4	7.2	7.3	7.6	7.4	7.5
10	7.5	7.3	7.4	7.2	7.0	7.1	7.5	7.2	7.3	7.6	7.4	7.5
11	7.6	7.4	7.5	7.3	7.1	7.2	7.5	7.2	7.3	7.6	7.4	7.5
12	7.6	7.4	7.5	7.2	7.1	7.2	7.4	7.2	7.3	7.6	7.4	7.5
13	7.6	7.3	7.5	7.2	7.1	7.1	7.5	7.2	7.3	7.6	7.4	7.5
14	7.5	7.3	7.4	7.2	7.1	7.1	7.4	7.2	7.3	7.5	7.4	7.5
15	7.5	7.3	7.4	7.2	7.0	7.1	7.4	7.1	7.2	7.5	7.4	7.5
16	7.5	7.3	7.3	7.2	7.0	7.1	7.4	7.2	7.3	7.6	7.4	7.5
17	7.5	7.3	7.4	7.2	7.0	7.1	7.4	7.2	7.3	7.5	7.4	7.4
18	7.5	7.3	7.4	7.2	7.0	7.1	7.4	7.2	7.3	7.5	7.3	7.4
19	7.4	7.3	7.3	7.2	7.0	7.1	7.4	7.2	7.3	7.5	7.3	7.4
20	7.4	7.3	7.3	7.2	7.0	7.1	7.4	7.2	7.3	7.5	7.3	7.4
21	7.4	7.2	7.3	7.2	7.0	7.1	7.5	7.3	7.4	7.5	7.3	7.4
22	7.4	7.2	7.3	7.3	7.1	7.2	7.4	7.3	7.4	7.5	7.3	7.4
23	7.4	7.3	7.3	7.5	7.2	7.3	7.4	7.3	7.3	7.5	7.3	7.4
24	7.5	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3	7.4	7.3	7.4
25	7.4	7.3	7.4	7.4	7.3	7.3	7.5	7.3	7.4	7.5	7.3	7.4
26	7.4	7.2	7.3	7.5	7.2	7.3	7.5	7.3	7.4	7.5	7.3	7.4
27	7.4	7.2	7.3	7.6	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3
28	7.8	7.2	7.3	7.6	7.3	7.4	7.5	7.3	7.4	7.3	7.2	7.3
29	7.3	7.1	7.2	7.6	7.3	7.4	7.4	7.3	7.3	7.4	7.2	7.3
30	7.3	7.1	7.2	7.6	7.3	7.4	7.4	7.2	7.3	7.4	7.1	7.3
31	---	---	---	7.5	7.2	7.4	7.4	7.2	7.3	---	---	---
MONTH	7.8	6.9	7.3	7.6	7.0	7.2	7.5	7.1	7.3	7.6	7.1	7.4

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	18.5	19.0	10.5	9.5	10.0	5.0	4.0	4.5			
2	18.5	18.0	18.5	10.5	9.5	10.0	4.5	3.5	4.0			
3	18.5	18.0	18.0	10.5	9.5	10.0	4.0	2.5	3.5			
4	19.0	18.0	18.5	10.5	9.5	10.0	3.5	2.5	3.0			
5	18.0	18.0	18.0	10.0	9.5	10.0	3.5	2.0	3.0			
6	19.0	17.5	18.0	9.5	9.0	9.5	3.5	2.5	3.0			
7	19.0	18.0	18.5	9.5	8.0	9.0	4.0	3.0	3.5			
8	19.0	18.5	18.5	9.0	8.0	8.5	3.5	2.0	3.0			
9	19.0	18.5	18.5	8.5	7.5	8.0	3.0	1.5	2.5			
10	18.5	17.5	18.0	8.5	7.0	7.5	3.0	2.0	2.5			
11	17.5	16.5	17.0	8.0	7.5	7.5	3.0	2.0	2.5			
12	17.0	16.5	16.5	---	---	---	3.0	2.0	3.0			
13	17.0	16.0	16.5	---	---	---	3.5	1.5	2.5			
14	17.0	16.0	16.5	---	---	---	2.0	1.5	2.0			
15	16.5	15.5	16.0	---	---	---	2.5	1.5	2.0			
16	16.0	15.0	15.5	6.5	6.0	6.5	2.5	1.5	2.0			
17	15.5	14.5	15.0	6.5	6.0	6.0	2.5	1.5	2.0			
18	15.0	14.0	14.5	6.5	6.0	6.5	3.0	1.5	2.0			
19	14.5	13.5	14.0	7.0	6.0	6.5	3.0	2.0	2.5			
20	14.5	14.0	14.0	6.5	6.0	6.5	3.0	2.0	2.5			
21	14.0	13.5	14.0	6.5	6.0	6.0	3.0	2.0	2.5			
22	13.5	12.0	13.0	6.5	5.5	6.0	---	---	---			
23	13.0	11.5	12.5	6.0	5.0	5.5	---	---	---			
24	12.5	12.0	12.0	5.5	4.5	5.0	---	---	---			
25	12.5	12.0	12.5	5.5	5.0	5.0	---	---	---			
26	12.5	11.5	12.0	5.5	5.0	5.0	---	---	---			
27	11.5	10.5	11.0	6.0	5.0	5.5	---	---	---			
28	11.0	10.0	10.5	6.0	5.5	5.5	---	---	---			
29	10.5	10.0	10.5	6.0	5.0	5.5	---	---	---			
30	10.5	10.0	10.5	5.5	4.5	5.0	---	---	---			
31	11.0	10.0	10.5	---	---	---	---	---	---			
MONTH	19.0	10.0	15.0	10.5	4.5	7.0	5.0	1.5	3.0			

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	5.0	3.5	4.0	10.5	9.0	9.5	16.5	15.5	16.0
2	---	---	---	5.0	3.5	4.0	9.5	9.0	9.5	17.5	16.0	16.5
3	---	---	---	5.0	4.0	4.5	11.0	9.5	10.0	18.0	16.5	17.0
4	---	---	---	5.0	4.0	4.5	10.0	9.5	9.5	17.5	16.5	17.0
5	---	---	---	6.0	4.5	5.0	10.0	9.0	9.5	17.5	16.5	17.0
6	---	---	---	6.0	5.5	5.5	10.0	9.0	9.5	18.5	17.0	17.5
7	---	---	---	6.5	5.5	6.0	10.0	9.0	9.5	18.5	17.5	18.0
8	---	---	---	6.5	5.5	6.0	10.0	9.5	10.0	18.5	17.0	17.5
9	---	---	---	7.0	5.5	6.5	10.0	9.0	9.5	17.5	15.0	16.5
10	---	---	---	7.5	6.0	7.0	10.5	9.0	9.5	16.0	15.0	15.5
11	---	---	---	8.0	6.5	7.0	10.5	9.5	10.0	16.0	14.5	15.5
12	---	---	---	8.0	7.0	7.5	12.0	9.5	10.5	16.5	15.0	15.5
13	---	---	---	8.5	7.5	8.0	13.0	10.5	11.5	17.5	15.5	16.5
14	---	---	---	9.0	8.0	8.5	13.0	11.5	12.0	17.5	16.0	16.5
15	---	---	---	9.5	8.0	9.0	13.0	11.5	12.5	18.0	16.0	17.0
16	---	---	---	10.0	8.5	9.0	13.5	12.0	12.5	18.0	16.5	17.0
17	---	---	---	9.5	8.5	9.0	14.0	12.5	13.0	19.0	17.0	18.0
18	---	---	---	9.5	9.0	9.0	14.5	12.5	13.5	20.0	18.0	18.5
19	---	---	---	9.5	8.5	9.0	14.5	13.0	14.0	19.5	18.5	19.0
20	---	---	---	9.0	8.5	8.5	14.5	13.5	14.0	20.5	18.5	19.5
21	---	---	---	9.5	8.5	8.5	15.0	14.0	14.5	20.5	19.0	20.0
22	---	---	---	8.5	8.5	8.5	16.0	14.5	15.0	21.0	20.0	20.5
23	1.5	1.0	1.5	9.0	7.5	8.0	17.0	15.0	16.0	22.0	20.5	21.0
24	2.0	1.0	1.5	8.0	6.5	7.5	16.5	15.5	16.0	22.0	21.0	21.5
25	3.5	1.5	2.5	7.0	6.5	6.5	16.5	15.5	16.0	22.5	21.5	21.5
26	3.5	2.5	3.0	7.0	6.0	6.5	16.5	15.5	16.0	23.0	21.5	22.0
27	4.5	3.0	3.5	8.0	6.5	7.0	16.0	15.5	16.0	23.5	21.5	22.5
28	4.5	3.5	4.0	7.5	6.5	7.0	16.5	15.0	15.5	24.0	22.0	23.0
29	---	---	---	9.5	7.0	8.0	16.5	15.0	15.5	23.5	22.0	23.0
30	---	---	---	10.0	8.0	9.0	17.0	15.0	15.5	22.5	22.0	22.0
31	---	---	---	10.0	9.0	9.5	---	---	---	22.0	21.5	22.0
MONTH	4.5	1.0	2.5	10.0	3.5	7.0	17.0	9.0	12.5	24.0	14.5	18.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	21.5	21.5	25.5	24.5	25.0	---	---	---	28.0	27.0	27.5
2	23.0	21.5	22.0	26.0	25.0	25.5	---	---	---	28.0	27.0	27.5
3	22.5	21.5	22.0	26.5	24.5	25.5	---	---	---	28.5	27.5	28.0
4	22.5	21.5	22.0	26.0	25.0	25.5	28.0	27.0	27.5	28.0	27.0	27.5
5	22.0	21.5	22.0	26.5	25.5	26.0	28.5	27.5	28.0	28.0	27.5	27.5
6	22.0	21.0	21.5	26.5	26.0	26.0	29.0	27.5	28.0	28.0	27.5	27.5
7	21.0	20.5	21.0	26.5	25.5	26.0	29.0	28.0	28.5	28.0	26.5	27.5
8	20.5	20.0	20.5	27.5	26.0	26.5	29.5	28.5	28.5	27.0	26.5	27.0
9	20.5	19.5	20.0	27.5	26.5	27.0	29.5	28.5	29.0	26.5	26.0	26.0
10	19.5	19.0	19.5	27.5	26.0	27.0	29.5	28.5	29.0	26.5	25.5	26.0
11	20.0	19.0	19.0	26.5	26.0	26.0	29.5	28.5	29.0	26.0	25.0	25.5
12	20.5	19.0	19.5	27.0	26.0	26.5	29.0	28.5	29.0	26.0	24.5	25.0
13	22.0	19.5	20.5	28.0	26.0	27.0	29.0	28.5	28.5	25.0	24.0	24.5
14	21.5	20.0	20.5	28.0	26.5	27.5	28.5	28.5	28.5	24.5	24.0	24.5
15	21.5	20.5	21.0	29.0	27.0	27.5	29.0	28.0	28.5	24.0	23.0	23.5
16	22.5	20.5	21.5	29.0	27.0	28.0	28.5	28.0	28.5	23.5	23.0	23.5
17	22.5	21.0	21.5	29.0	26.5	28.0	28.5	28.0	28.5	24.0	23.5	23.5
18	23.0	21.5	22.5	29.0	25.5	27.0	28.0	27.5	27.5	24.5	23.5	24.0
19	23.5	22.0	23.0	29.0	26.5	28.0	27.5	26.5	27.5	25.0	23.5	24.0
20	23.5	22.5	23.0	29.0	28.0	27.5	27.5	27.0	27.0	25.0	24.0	24.5
21	23.5	22.5	23.5	31.5	28.0	29.5	27.0	26.0	26.5	24.5	23.5	24.0
22	23.5	22.5	23.0	30.5	29.5	30.0	27.0	26.0	26.5	24.0	23.0	23.5
23	24.0	22.5	23.0	---	---	---	27.0	26.0	26.5	23.5	23.0	23.5
24	24.0	22.5	23.0	---	---	---	27.0	26.0	26.5	23.5	23.0	23.5
25	23.5	23.0	23.5	---	---	---	26.5	25.5	26.0	23.0	22.5	23.0
26	25.0	23.0	24.0	---	---	---	26.5	25.5	26.0	23.0	22.5	22.5
27	25.5	23.5	24.0	---	---	---	26.5	25.5	26.0	23.0	22.5	23.0
28	25.0	24.0	24.5	---	---	---	27.0	25.5	26.0	23.0	22.5	22.5
29	25.5	24.0	25.0	---	---	---	27.5	26.0	26.5	22.5	22.0	22.5
30	25.5	24.5	25.0	---	---	---	28.0	26.5	27.0	22.5	22.0	22.0
31	---	---	---	---	---	---	27.5	26.5	27.0	---	---	---
MONTH	25.5	19.0	22.0	31.5	24.5	27.0	29.5	25.5	27.5	28.5	22.0	25.0

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.6	6.6	7.2	9.0	7.9	8.4	11.2	10.5	10.8			
2	7.3	6.5	6.8	10.6	8.2	9.3	11.7	10.6	11.1			
3	6.7	6.2	6.5	10.6	9.7	10.1	14.6	11.3	12.0			
4	6.4	6.0	6.2	10.5	9.9	10.1	11.7	11.3	11.5			
5	6.2	5.7	5.9	10.4	9.8	10.1	14.1	11.3	11.6			
6	6.0	5.3	5.6	10.4	9.8	10.2	11.8	11.3	11.5			
7	5.7	5.1	5.4	14.9	10.0	10.7	12.2	11.7	11.9			
8	5.7	4.9	5.3	14.5	10.3	11.0	12.4	10.0	12.1			
9	5.5	4.8	5.2	11.4	10.7	11.0	12.6	11.9	12.2			
10	5.6	5.1	5.3	11.2	10.8	11.1	12.8	12.1	12.5			
11	5.7	5.1	5.4	11.2	11.0	---	15.0	12.3	13.1			
12	5.9	5.2	5.6	---	---	---	13.6	12.7	13.1			
13	6.2	5.4	5.8	---	---	---	16.2	13.1	14.1			
14	6.9	5.6	6.1	---	---	---	15.6	13.0	13.7			
15	6.9	5.9	6.5	---	---	---	16.8	13.4	13.9			
16	9.5	6.3	7.1	10.4	9.9	10.2	17.1	13.4	13.8			
17	8.5	7.3	8.1	10.4	9.7	10.1	14.2	13.4	13.8			
18	8.6	7.8	8.3	10.4	9.7	10.1	14.2	13.4	13.7			
19	8.6	8.0	8.3	10.5	9.8	10.1	17.1	13.0	13.7			
20	8.5	7.7	8.1	10.5	9.8	10.1	14.1	13.0	13.5			
21	8.6	7.8	8.2	10.4	9.8	10.1	16.8	13.0	13.7			
22	11.5	7.7	8.7	13.2	9.9	10.7	---	---	---			
23	11.8	7.9	8.7	13.7	10.1	11.1	---	---	---			
24	9.3	7.7	8.1	13.8	10.4	11.0	---	---	---			
25	8.2	7.2	7.7	10.9	10.4	10.7	---	---	---			
26	8.5	7.3	8.0	10.9	10.4	10.7	---	---	---			
27	8.9	7.8	8.4	11.0	10.4	10.6	---	---	---			
28	8.7	7.8	8.4	10.8	10.3	10.6	---	---	---			
29	8.6	7.8	8.1	10.8	10.2	10.5	---	---	---			
30	8.7	7.7	8.1	11.0	10.3	10.7	---	---	---			
31	8.8	7.9	8.3	---	---	---	---	---	---			
MONTH	11.8	4.8	7.1	14.9	7.9	10.4	17.1	10.0	12.7			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	10.9	9.3	10.2	10.3	9.7	10.0	6.9	6.0	6.4
2	---	---	---	13.3	9.3	10.1	10.0	9.6	9.9	6.8	6.0	6.5
3	---	---	---	11.2	8.6	9.6	9.9	9.4	9.7	8.4	5.9	6.4
4	---	---	---	10.4	8.3	9.5	9.6	9.1	9.4	6.5	5.7	6.1
5	---	---	---	10.1	7.8	9.1	9.5	8.9	9.2	6.5	5.3	5.8
6	---	---	---	9.3	6.9	7.9	11.8	9.0	9.4	6.2	5.1	5.6
7	---	---	---	8.2	6.9	7.3	12.2	9.1	9.6	6.0	4.9	5.4
8	---	---	---	8.0	7.2	7.6	12.6	9.2	9.9	5.8	4.9	5.4
9	---	---	---	8.4	7.6	7.8	11.7	9.6	10.0	9.0	5.3	6.4
10	---	---	---	8.7	7.7	8.0	10.8	9.6	9.8	8.6	6.5	7.7
11	---	---	---	8.6	7.8	8.1	9.8	9.6	9.6	8.7	7.9	8.3
12	---	---	---	8.6	7.9	8.2	9.6	9.4	9.5	8.5	7.6	8.1
13	---	---	---	8.8	8.2	8.6	9.4	9.1	9.3	8.4	7.5	7.9
14	---	---	---	9.2	8.5	8.8	9.2	9.0	9.1	8.6	7.7	8.1
15	---	---	---	9.1	8.7	8.9	9.1	8.8	9.0	8.6	7.6	8.0
16	---	---	---	9.1	8.4	8.8	8.9	8.6	8.7	8.6	7.5	7.9
17	---	---	---	9.1	8.5	8.8	8.7	8.4	8.5	8.8	7.4	7.9
18	---	---	---	9.3	8.8	9.0	8.7	8.2	8.4	8.3	7.4	7.9
19	---	---	---	12.5	9.2	9.9	8.4	8.0	8.1	8.5	7.5	8.0
20	---	---	---	9.7	9.5	9.6	8.3	7.9	8.1	8.9	7.5	8.2
21	---	---	---	10.1	9.5	9.6	8.1	7.8	7.9	8.5	7.6	8.0
22	---	---	---	10.1	9.6	9.9	8.0	7.6	7.8	8.4	7.5	7.9
23	12.1	11.6	11.9	13.1	9.9	10.8	8.0	7.5	7.8	8.2	7.2	7.8
24	12.3	11.6	11.9	12.7	10.2	10.8	8.0	7.6	7.8	8.0	7.2	7.5
25	12.3	11.2	11.8	12.9	10.4	10.9	8.0	7.6	7.7	7.6	6.7	7.1
26	11.7	10.3	11.2	11.1	10.7	10.9	8.3	6.7	7.5	7.3	6.3	6.9
27	11.5	10.0	10.8	11.2	10.7	10.9	7.0	6.4	6.7	7.0	6.4	6.8
28	10.9	9.6	10.4	11.1	10.4	10.7	7.0	6.2	6.6	7.0	6.2	6.6
29	---	---	---	10.8	10.3	10.5	7.1	6.3	6.7	7.1	6.0	6.7
30	---	---	---	10.5	10.0	10.3	7.0	6.3	6.6	7.3	6.4	6.8
31	---	---	---	11.5	9.9	10.2	---	---	---	6.9	6.2	6.5
MONTH	12.3	9.6	11.3	13.3	6.9	9.4	12.6	6.2	8.6	9.0	4.9	7.1

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.9	6.2	6.6	6.3	5.7	6.0	7.1	6.3	6.6	6.2	5.4	5.7
2	6.9	6.1	6.5	6.2	5.5	5.8	6.9	5.9	6.3	5.9	5.3	5.6
3	9.3	6.3	6.8	6.2	5.4	5.7	6.6	5.7	6.1	5.7	5.2	5.5
4	8.2	6.4	6.8	6.0	5.4	5.6	6.2	5.0	5.7	6.1	5.4	5.7
5	7.0	6.4	6.7	5.8	5.0	5.4	5.5	4.9	5.2	6.3	5.6	5.8
6	7.0	6.3	6.7	5.8	4.9	5.3	5.4	4.9	5.1	5.9	5.5	5.7
7	7.3	6.6	7.0	5.5	5.0	5.2	5.6	4.8	5.1	6.0	5.4	5.7
8	7.6	7.0	7.3	5.3	4.5	4.9	6.6	5.0	5.6	6.3	5.6	5.9
9	7.7	7.3	7.6	4.6	4.2	4.4	6.6	5.7	6.1	6.4	5.9	6.1
10	8.1	7.4	7.7	4.8	4.4	4.6	6.5	5.6	6.0	6.5	6.1	6.3
11	8.2	7.7	8.0	5.2	4.8	5.0	6.5	5.6	6.0	6.8	6.0	6.4
12	8.4	7.8	8.0	5.5	5.1	5.3	6.3	5.5	5.8	6.9	6.4	6.6
13	8.8	7.7	8.0	5.5	5.0	5.2	6.2	5.4	5.7	7.0	6.5	6.7
14	8.5	7.7	7.9	5.3	4.8	5.1	5.9	5.4	5.6	7.0	6.6	6.8
15	7.9	7.5	7.7	5.2	4.6	4.9	6.2	5.1	5.6	7.1	6.7	6.9
16	8.3	7.2	7.5	4.8	4.3	4.5	6.6	5.4	5.9	7.1	6.7	6.9
17	8.1	7.2	7.6	---	---	---	6.2	5.7	6.0	7.0	6.6	6.8
18	8.1	7.2	7.5	---	---	---	6.3	5.6	5.9	6.8	6.4	6.6
19	7.7	7.1	7.4	---	---	---	6.5	5.6	5.9	6.7	6.3	6.5
20	7.7	7.0	7.1	5.6	5.0	5.2	6.3	5.6	5.8	6.5	6.2	6.3
21	7.4	6.8	7.0	5.7	5.0	5.2	6.8	5.8	6.2	6.5	6.2	6.4
22	7.3	6.8	7.0	6.2	5.1	5.6	6.8	6.2	6.5	6.6	6.2	6.4
23	7.5	6.8	7.1	6.6	5.6	6.1	6.5	5.8	6.2	6.6	6.1	6.3
24	7.4	6.9	7.1	6.5	5.9	6.2	6.2	5.8	5.9	6.5	6.2	6.3
25	7.2	6.8	7.0	6.3	6.0	6.1	6.5	5.8	6.1	6.9	6.4	6.6
26	7.1	6.6	6.8	7.5	5.7	6.1	6.5	5.9	6.1	6.8	6.5	6.7
27	7.0	6.4	6.7	7.8	5.9	6.7	6.8	6.0	6.2	6.6	6.4	6.5
28	6.8	5.8	6.5	8.1	6.7	7.3	6.4	5.9	6.1	6.6	6.2	6.4
29	6.5	6.1	6.3	8.0	6.9	7.4	6.4	5.8	6.0	6.8	6.1	6.4
30	6.5	5.9	6.2	7.5	6.6	7.1	6.2	5.6	5.9	6.8	5.9	6.4
31	---	---	---	7.3	6.3	6.8	6.0	5.4	5.7	---	---	---
MONTH	9.3	5.8	7.1	8.1	4.2	5.7	7.1	4.8	5.9	7.1	5.2	6.3

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE

LOCATION.--Lat 39°21'58", long 75°40'10", New Castle County, Hydrologic Unit 02040205, on right bank 15 ft (5 m) downstream from highway bridge, 0.5 mi (0.8 km) upstream from Barlow Branch, 0.6 mi (1.0 km) southwest of Blackbird, 5.6 mi (9.0 km) northwest of Smyrna, and 13.8 mi (22.2 km) upstream from mouth.

DRAINAGE AREA.--3.85 mi² (9.97 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1952-56, and occasional low-flow measurements, water years 1952-53, 1955-56. October 1956 to current year.

GAGE.--Water-stage recorder. Concrete control since May 23, 1968. Datum of gage is 18.89 ft (5.758 m) above mean sea level. Mar. 5, 1951, to Oct. 16, 1956, nonrecording gage and crest-stage gage at site 15 ft (5 m) upstream at same datum.

REMARKS.--Water-discharge records good except those for period Jan. 18 to Feb. 14, which are fair.

AVERAGE DISCHARGE.--21 years, 4.61 ft³/s (0.131 m³/s), 16.26 in/yr (413 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 712 ft³/s (20.2 m³/s) June 22, 1972, gage height, 5.04 ft (1.536 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of Type III culvert measurement of peak flow; no flow at times during 1964, 1965, 1966, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63 ft³/s (1.78 m³/s) June 9, gage height, 2.35 ft (0.716 m), no other peak above base of 50 ft³/s (1.4 m³/s); minimum, 0.07 ft³/s (0.002 m³/s) July 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	4.1	1.5	1.5	1.1	2.9	2.7	1.8	.74	.61	.13	.36
2	8.0	2.0	1.5	1.5	1.2	2.6	7.7	1.9	1.8	.55	.15	.26
3	4.2	1.8	1.4	1.6	1.4	2.5	9.7	2.0	.92	.45	.19	.22
4	2.1	1.7	1.2	1.8	2.5	3.1	4.5	1.9	.65	.40	.22	.24
5	1.2	1.6	1.3	1.8	3.0	3.0	10	2.0	.58	.43	.24	.24
6	1.2	1.6	1.4	1.6	2.0	2.6	7.3	2.2	1.1	.41	.24	.87
7	1.1	1.5	10	2.0	1.3	2.4	4.2	3.0	1.3	.99	.22	1.5
8	.94	1.5	10	1.7	1.3	2.3	3.6	1.8	.82	1.2	.21	.61
9	2.3	1.5	3.4	1.7	1.4	2.2	3.2	1.6	13	.72	.19	.69
10	1.9	1.5	2.4	7.4	1.6	2.1	3.1	1.5	11	.57	.19	2.3
11	1.1	1.5	2.5	6.4	2.0	2.0	3.1	1.4	2.2	.51	.87	.82
12	.93	1.5	2.6	3.5	3.0	2.0	2.9	1.4	1.4	.39	.40	.39
13	.92	1.5	2.3	1.9	5.0	3.1	3.0	1.2	1.1	.39	.28	.26
14	.76	1.5	1.8	2.0	4.0	4.6	3.3	1.1	.94	.35	.38	.21
15	.73	1.5	1.9	3.1	3.3	2.6	2.6	1.0	1.1	.29	.62	.19
16	.59	1.5	2.1	2.9	2.6	2.3	2.3	.98	1.0	.34	.43	.23
17	.99	1.5	2.1	1.8	2.0	2.0	2.3	.95	.87	.37	.76	.40
18	1.4	1.5	1.9	1.5	1.7	5.8	2.2	.94	1.2	.37	1.2	.38
19	.99	1.5	1.8	1.5	2.0	5.4	2.1	.99	.81	.32	.40	.21
20	6.6	1.5	2.4	1.4	2.4	3.0	2.1	1.0	.75	.30	.27	.19
21	14	1.5	4.1	1.3	2.1	2.7	2.1	.88	.65	.18	.25	.19
22	3.6	1.4	2.0	1.3	2.0	16	2.0	.80	.54	.17	.22	.19
23	1.6	1.4	1.9	1.2	2.4	18	1.9	.79	.46	.18	.23	.21
24	1.5	1.4	1.8	1.2	6.9	5.3	2.3	.76	.39	.15	5.2	.71
25	2.3	1.4	1.6	1.5	25	3.7	4.4	.93	.44	.13	5.4	.50
26	16	1.4	5.4	2.0	8.6	3.3	5.5	1.0	.73	.11	.86	1.1
27	6.5	1.5	3.3	2.5	4.3	3.1	2.7	.72	.49	.10	.52	.65
28	2.3	1.5	2.4	2.0	3.7	3.3	2.3	.67	3.0	.09	.38	.51
29	1.7	2.8	2.5	1.7	---	3.4	2.8	.52	5.4	.08	.27	.33
30	1.7	2.1	2.0	1.3	---	3.2	2.0	.51	1.1	.09	.22	.21
31	6.1	---	1.8	1.2	---	2.9	---	.68	---	.10	.24	---
TOTAL	98.55	50.2	84.3	65.8	99.8	123.4	109.9	38.92	56.48	11.34	21.38	15.17
MEAN	3.18	1.67	2.72	2.12	3.56	3.98	3.66	1.26	1.88	.37	.69	.51
MAX	16	4.1	10	7.4	25	18	10	3.0	13	1.2	5.4	2.3
MIN	.59	1.4	1.2	1.2	1.1	2.0	1.9	.51	.39	.08	.13	.19
CFSM	.83	.43	.71	.55	.93	1.03	.95	.33	.49	.10	.18	.13
IN.	.95	.48	.81	.64	.96	1.19	1.06	.38	.55	.11	.21	.15

CAL YR 1976 TOTAL 1380.04 MEAN 3.77 MAX 73 MIN .16 CFSM .98 IN 13.33
WTR YR 1977 TOTAL 775.24 MEAN 2.12 MAX 25 MIN .08 CFSM .55 IN 7.49

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV 15...	1200	1.5	113	--	9.0	5.0	--
DEC 07...	1520	17	147	7.1	8.5	4.5	6.3
JAN 14...	1420	1.9	105	6.4	-1.0	1.5	5.3
FEB 14...	1430	3.7	100	7.0	11.5	3.5	12.4
MAR 29...	1230	3.5	70	7.0	27.0	13.0	11.8
MAY 10...	1000	1.6	75	7.5	12.0	14.5	9.6
JUN 21...	0910	.45	92	6.8	20.5	22.5	6.5
AUG 08...	1205	.19	179	6.8	32.5	29.0	5.2
SEP 14...	0740	.24	99	7.4	23.0	19.5	5.1

01483700 ST. JONES RIVER AT DOVER, DE

LOCATION.--Lat 39°09'49", long 75°31'10", Kent County, Hydrologic Unit 02040207, on left bank 150 ft (46 m) upstream from Division Street Bridge in Dover, 1,950 ft (594 m) downstream from Silver Lake, and 12.5 mi (20.1 km) upstream from mouth.

DRAINAGE AREA.--31.9 mi^2 (82.6 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.50 ft (0.152 m) above mean sea level.

REMARKS.--Water-discharge records good. Flow affected by Silver Lake.

AVERAGE DISCHARGE.--19 years, 35.4 ft^3/s (1.003 m^3/s), 15.07 in/yr (383 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft^3/s (53.8 m^3/s) Sept. 13, 1960, gage height, 9.45 ft (2.880 m), from floodmark; no flow at times in 1959, 1961, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 260 ft^3/s (7.36 m^3/s) Sept. 6, gage height, 4.16 ft (1.268 m); minimum, 0.30 ft^3/s (0.008 m^3/s) July 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	40	18	16	13	35	20	13	3.2	4.1	1.9	5.9
2	87	39	16	14	11	29	26	11	4.3	26	2.3	3.5
3	53	29	11	14	13	24	41	11	4.3	11	1.7	2.7
4	30	23	11	16	13	25	37	9.2	2.3	4.6	1.8	1.8
5	12	20	11	16	16	26	49	14	1.9	2.7	1.8	3.5
6	8.0	19	11	16	18	26	61	22	3.5	5.5	1.6	44
7	7.1	17	43	19	16	25	47	31	4.6	15	1.4	81
8	6.7	17	66	17	13	22	31	25	2.5	11	.86	39
9	19	15	68	17	12	19	25	22	16	7.3	.78	23
10	24	16	44	48	13	18	23	12	39	5.2	9.7	43
11	23	16	29	52	17	18	22	12	38	2.9	7.7	24
12	12	16	26	62	23	19	22	13	13	3.1	4.0	9.2
13	8.4	16	26	38	29	23	19	14	6.4	3.3	2.5	5.9
14	8.4	15	20	27	32	30	17	12	4.6	2.5	3.1	4.9
15	5.5	14	18	38	31	27	16	10	5.6	1.7	3.1	3.5
16	5.5	16	18	39	26	24	15	11	5.2	2.4	2.2	3.7
17	6.7	16	19	48	19	18	14	11	4.9	2.3	16	5.2
18	8.4	16	17	33	16	29	13	7.3	8.7	2.2	23	5.2
19	7.1	14	16	23	17	37	13	6.8	6.4	1.5	8.7	4.3
20	29	13	18	18	19	32	13	7.3	4.6	1.2	5.2	4.3
21	56	13	23	17	20	26	13	7.3	4.6	1.1	2.9	3.1
22	74	15	17	16	17	55	13	5.9	2.9	1.1	2.3	4.3
23	47	13	16	16	20	91	13	4.0	2.0	.64	2.5	6.8
24	25	13	14	15	32	93	13	4.0	1.9	.39	13	7.7
25	20	13	12	16	61	53	25	4.9	2.5	.58	49	7.3
26	45	13	24	16	65	33	30	5.6	4.3	1.2	56	6.4
27	52	13	31	18	49	27	27	4.9	2.7	.78	18	6.4
28	45	13	25	20	40	27	21	3.5	3.1	.71	6.8	5.9
29	29	16	23	19	---	28	19	2.5	9.8	.71	3.7	4.6
30	22	16	19	18	---	28	15	1.9	7.3	1.4	2.9	3.1
31	36	---	19	16	---	27	---	2.0	---	2.9	5.9	---
TOTAL	874.8	525	729	758	671	994	713	321.1	220.1	127.01	262.34	373.2
MEAN	28.2	17.5	23.5	24.5	24.0	32.1	23.8	10.4	7.34	4.10	8.46	12.4
MAX	87	40	68	62	65	93	61	31	39	26	56	81
MIN	5.5	13	11	14	11	18	13	1.9	1.9	.39	.78	1.8
CFSM	.88	.55	.74	.77	.75	1.01	.75	.33	.23	.13	.27	.39
IN.	1.02	.61	.85	.88	.78	1.16	.83	.37	.26	.15	.31	.44

CAL YR 1976 TOTAL 11656.10 MEAN 31.8 MAX 435 MIN .80 CFSM 1.00 IN 13.59
WTR YR 1977 TOTAL 6568.55 MEAN 18.0 MAX 93 MIN .39 CFSM .56 IN 7.66

01483700 ST. JONES RIVER AT DOVER, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-72, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
OCT									
04...	1450	27	--	6.8	19.5	19.0	--	--	--
05...	1015	12	--	6.6	18.5	17.5	--	--	--
NOV									
03...	1415	28	172	6.9	14.0	9.5	35	--	50
DEC									
01...	1640	17	195	6.6	12.0	5.0	--	11.4	--
20...	1340	15	166	7.7	9.5	4.5	65	7.6	44
JAN									
03...	1025	14	196	6.9	-1.5	.0	--	5.2	--
FEB									
01...	1005	13	179	6.6	3.5	.0	--	--	--
MAR									
01...	1545	35	170	7.4	12.0	9.0	5	12.9	42
APR									
04...	1505	34	181	7.3	9.0	13.0	--	10.1	--
MAY									
02...	1650	11	160	7.5	25.5	20.0	--	10.6	--
JUN									
01...	1510	4.2	191	7.4	23.0	24.0	60	6.0	52
JUL									
01...	1140	5.0	217	7.1	32.0	28.0	--	8.0	--
19...	1050	1.5	219	7.0	32.5	30.5	--	7.8	--
20...	1030	.88	219	6.7	27.0	27.5	--	6.5	--
AUG									
01...	1405	2.0	223	7.7	29.0	27.5	--	12.4	--
SEP									
01...	1445	5.5	280	7.3	31.0	28.0	25	8.5	59

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT									
04...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
NOV									
03...	27	14	3.6	11	3.2	28	38	9.6	.2
DEC									
01...	--	--	--	--	--	--	--	--	--
20...	17	12	3.3	11	3.0	32	29	12	.2
JAN									
03...	--	--	--	--	--	--	--	--	--
FEB									
01...	--	--	--	--	--	--	--	--	--
MAR									
01...	21	12	3.0	14	2.3	26	33	9.1	.1
APR									
04...	--	--	--	--	--	--	--	--	--
MAY									
02...	--	--	--	--	--	--	--	--	--
JUN									
01...	25	15	3.5	22	3.1	33	35	24	.1
JUL									
01...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
SEP									
01...	29	17	4.0	29	4.1	36	77	10	.2

01483700 ST. JONES RIVER AT DOVER, DE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)
OCT									
04...	--		--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
NOV									
03...	16	123	110	.01	.10	800	220	90	80
DEC									
01...	--	--	--	--	--	--	--	--	--
20...	19	100	106	.49	.09	950	430	120	120
JAN									
03...	--	--	--	--	--	--	--	--	--
FEB									
01...	--	--	--	--	--	--	--	--	--
MAR									
01...	16	115	103	.58	.08	280	250	90	80
APR									
04...	--	--	--	--	--	--	--	--	--
MAY									
02...	--	--	--	--	--	--	--	--	--
JUN									
01...	12	151	131	.25	.13	1300	350	110	100
JUL									
01...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
SEP									
01...	11	182	171	.22	.10	680	430	100	90

01484000 MURDERKILL RIVER NEAR FELTON, DE

LOCATION.--Lat 38°58'33", long 75°34'03", Kent County, Hydrologic Unit 02040207, on left bank 30 ft (9 m) downstream from northbound lane of bridge on U.S. Highway 13, 400 ft (122 m) downstream from Black Swamp Creek, 1.3 mi (2.1 km) upstream from Killen Pond, 2.2 mi (3.5 km) south of Felton, and 17.6 mi (28.3 km) upstream from mouth.

DRAINAGE AREA.--13.6 mi² (35.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1931 to October 1933. Monthly discharge only for July to September 1931, published in WSP 1302. Annual maximum, water years 1952-60, and occasional low-flow measurements, water years 1952-53, 1955-57, 1959-60. June 1960 to current year.

REVISED RECORDS.--WSP 1432: 1932.

GAGE.--Water-stage recorder. Datum of gage is 21.87 ft (6.666 m) above mean sea level. July 1931 to October 1933, nonrecording gage at bridge 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher. March 1951 to May 1960, nonrecording gage and crest-stage gage at bridge 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good except those for June 22 to Aug. 2, which are poor.

AVERAGE DISCHARGE.--19 years (water years 1932-33, 1961-77), 18.3 ft³/s (0.518 m³/s), 18.27 in/yr (464 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft³/s (59.2 m³/s) Aug. 4, 1967, gage height, 8.83 ft (2.691 m); minimum, 0.80 ft³/s (0.023 m³/s) Aug. 28, Sept. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 4, 1967, is believed to have been the highest since that of 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60 ft³/s (1.70 m³/s) Oct. 21, gage height, 4.13 ft (1.259 m), no peak above base of 130 ft³/s (3.6 m³/s); minimum, 1.0 ft³/s (0.028 m³/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	7.9	9.2	7.4	15	10	6.0	5.3	2.8	2.0	2.8
2	14	11	8.0	8.7	7.2	13	15	5.7	5.1	2.5	2.0	2.4
3	10	10	7.2	8.6	7.6	12	18	5.6	3.9	2.3	2.0	2.1
4	6.7	10	6.7	9.3	8.6	12	16	5.5	3.4	2.3	1.9	2.2
5	5.4	9.6	6.4	9.2	9.7	13	36	6.8	3.4	2.2	1.6	2.4
6	5.5	9.2	6.4	8.7	8.4	12	32	7.8	3.9	[illegible]	1.7	6.0
7	4.9	9.0	26	9.4	7.2	11	20	8.6	4.3	2.6	1.7	31
8	4.5	9.0	29	8.7	6.3	11	17	6.4	3.6	3.0	1.5	7.5
9	15	9.1	16	8.4	6.6	10	14	6.1	24	2.9	1.9	10
10	8.7	9.3	14	27	7.9	10	13	6.0	15	2.8	2.1	34
11	5.9	9.2	13	26	9.0	9.9	12	5.7	6.7	2.6	2.1	6.7
12	5.5	9.6	13	14	9.7	9.7	12	5.4	5.0	2.6	1.9	4.2
13	5.3	9.5	13	12	11	11	11	5.1	4.3	2.8	2.0	3.7
14	4.9	8.8	11	11	11	12	10	4.8	4.3	2.9	2.2	3.6
15	4.7	8.9	12	28	10	11	9.4	4.8	4.4	2.9	2.8	3.2
16	4.3	8.9	12	20	9.4	10	8.8	4.7	4.2	2.5	2.5	3.1
17	6.3	8.4	11	16	8.7	9.3	8.3	4.3	3.9	2.3	2.9	3.1
18	6.8	8.1	11	14	8.0	12	8.1	3.8	4.3	2.1	2.6	2.7
19	5.5	7.8	10	13	8.1	13	7.8	3.8	3.5	2.1	2.3	2.5
20	23	7.6	11	12	8.6	11	7.5	4.8	3.3	2.5	2.4	2.6
21	35	7.0	15	10	8.3	11	7.4	3.5	3.5	2.8	2.2	2.8
22	10	7.4	11	9.6	8.2	27	7.1	3.8	3.4	2.5	2.3	3.2
23	7.4	7.0	11	8.8	8.8	36	6.8	3.6	3.0	2.2	2.3	3.4
24	6.6	6.9	10	9.1	15	21	7.0	3.5	2.8	2.0	5.0	3.0
25	9.5	7.0	9.7	9.8	46	18	7.2	5.5	2.9	2.0	5.5	3.1
26	29	6.8	17	9.4	20	14	8.7	5.9	3.1	2.0	3.4	3.0
27	15	7.4	14	9.3	17	13	7.7	3.6	3.2	2.0	2.6	2.7
28	11	7.4	12	9.9	19	13	6.9	3.9	3.1	2.0	2.4	2.7
29	9.8	13	12	10	---	13	7.6	3.7	3.2	2.1	2.3	2.7
30	9.1	9.8	11	7.9	---	12	6.5	3.9	3.0	2.1	2.4	2.6
31	17	---	10	7.5	---	11	---	3.9	---	2.1	3.2	---
TOTAL	319.3	266.7	377.3	374.5	312.7	416.9	358.8	156.5	147.0	74.8	75.7	165.0
MEAN	10.3	8.89	12.2	12.1	11.2	13.4	12.0	5.05	4.90	2.41	2.44	5.50
MAX	35	14	29	28	46	36	36	8.6	24	3.0	5.5	34
MIN	4.3	6.8	6.4	7.5	6.3	9.3	6.5	3.5	2.8	2.0	1.5	2.1
CFSM	.76	.65	.90	.89	.82	.99	.88	.37	.36	.18	.18	.40
IN.	.87	.73	1.03	1.02	.86	1.14	.98	.43	.40	.20	.21	.45

CAL YR 1976 TOTAL 5214.6 MEAN 14.2 MAX 250 MIN 2.2 CFSM 1.04 IN 14.26
WTR YR 1977 TOTAL 3045.2 MEAN 8.34 MAX 46 MIN 1.5 CFSM .61 IN 8.33

01484000 MURDERKILL RIVER NEAR FELTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	AIR TEMPER-ATURE (DEG C)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
NOV 05...	1550	9.6	163	6.5	6.0	10.0	5.0
DEC 08...	0850	32	90	7.9	-1.0	5.0	--
FEB 18...	1410	9.0	187	7.0	4.0	--	--
APR 08...	1550	16	120	6.9	11.0	12.0	8.9
MAY 13...	1450	5.1	255	7.4	30.0	16.0	--
JUN 22...	0910	3.5	303	7.2	21.0	17.5	--
AUG 02...	1605	1.8	215	7.1	26.0	22.5	11.8
SEP 07...	1125	37	181	6.4	25.5	20.0	5.6

01484100 BEAVERDAM BRANCH AT HOUSTON, DE

LOCATION.--Lat 38°54'20", long 75°30'49", Kent County, Hydrologic Unit 02040207, on left bank 15 ft (5 m) upstream from bridge on State Highway 384, 0.8 mi (1.3 km) south of Houston, and 1.2 mi (1.9 km) upstream from Blairs Pond and mouth.

DRAINAGE AREA.--2.83 mi² (7.33 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder and timber control. Datum of gage is 35.67 ft (10.872 m) above mean sea level.

REMARKS.--Water-discharge records good. Diversion for irrigation of about 150 acres (60.7 ha) above station.

AVERAGE DISCHARGE.--19 years, 3.65 ft³/s (0.103 m³/s), 17.51 in/yr (445 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft³/s (4.98 m³/s) Sept. 12, 1960, gage height, 5.55 ft (1.692 m); no flow July 28, 1977 (result of pumpage for irrigation).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18 ft³/s (0.51 m³/s) Oct. 21, gage height, 2.80 ft (0.853 m), no peak above base of 30 ft³/s (0.8 m³/s); no flow July 28 (result of pumpage for irrigation).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.6	2.5	2.6	2.4	4.2	3.0	2.4	1.5	.91	.61	.51
2	2.6	3.8	2.6	2.5	2.3	3.8	3.8	2.3	1.4	.85	.58	.46
3	2.7	3.7	2.4	2.5	2.5	3.7	3.6	2.3	1.3	.63	.60	.47
4	1.8	3.6	2.4	2.7	2.5	3.8	3.5	2.3	1.3	.54	.45	.48
5	1.5	3.5	2.4	2.5	2.6	3.8	6.2	2.5	1.3	.47	.20	.55
6	1.5	3.3	2.4	2.5	2.4	3.6	5.0	2.5	1.4	.42	.24	.67
7	1.4	3.3	6.0	2.6	2.4	3.5	4.0	2.4	1.4	.79	.32	.93
8	1.4	3.2	5.0	2.5	2.3	3.4	3.8	2.3	1.3	.87	.26	.59
9	5.5	3.1	3.4	2.5	2.3	3.4	3.6	2.1	1.7	.92	.12	.90
10	3.5	3.1	3.2	7.0	2.4	3.3	3.5	2.1	1.6	.96	.04	2.9
11	2.1	3.1	3.3	5.0	2.4	3.3	3.5	2.1	1.5	.95	.26	1.0
12	2.0	3.1	3.3	3.5	2.5	3.3	3.4	2.0	1.4	.68	.26	.80
13	2.0	3.1	3.0	3.1	2.8	3.4	3.3	1.9	1.3	.51	.45	.73
14	1.8	3.1	2.9	3.6	2.6	3.3	3.2	1.9	1.3	.43	.63	.71
15	1.7	3.1	3.1	7.1	2.5	3.1	3.2	1.8	1.3	.30	.80	.67
16	1.6	2.9	3.1	4.6	2.4	3.1	3.1	1.8	1.3	.33	.67	.66
17	2.1	2.9	3.0	3.5	2.3	3.0	3.0	1.7	1.3	.46	.71	.78
18	1.9	2.9	2.9	3.3	2.3	3.6	3.0	1.7	1.3	.45	.70	.66
19	1.8	2.9	2.8	3.1	2.3	3.2	2.9	1.5	1.2	.07	.66	.60
20	5.6	2.7	3.1	3.1	2.4	3.2	2.8	1.6	1.2	.04	.67	.59
21	9.2	2.7	3.7	2.9	2.3	3.1	2.8	1.5	1.2	.06	.64	.61
22	3.7	2.7	2.9	2.8	2.3	5.6	2.7	1.5	1.1	.07	.63	.62
23	3.2	2.5	2.9	2.5	2.3	4.8	2.7	1.5	1.0	.04	.62	.62
24	3.2	2.5	2.7	2.6	4.0	3.8	2.7	1.5	1.0	.02	.68	.63
25	3.6	2.5	2.8	2.9	7.0	3.5	2.8	1.7	1.0	.10	.75	.61
26	6.2	2.5	3.7	2.9	3.9	3.4	2.9	1.8	1.0	.15	.60	.59
27	4.1	2.5	3.2	2.9	4.4	3.3	2.6	1.6	1.0	.11	.56	.54
28	3.5	2.6	3.1	2.9	5.7	3.5	2.6	1.5	1.0	.00	.52	.51
29	3.4	3.5	2.9	2.8	---	3.4	2.6	1.5	1.1	.01	.51	.48
30	3.3	2.8	2.7	2.5	---	3.3	2.4	1.5	.94	.28	.51	.47
31	6.0	---	2.8	2.5	---	3.2	---	1.5	---	.55	.50	---
TOTAL	97.7	91.8	96.2	100.0	80.5	109.9	98.2	58.3	37.64	12.97	15.75	21.34
MEAN	3.15	3.06	3.10	3.23	2.88	3.55	3.27	1.88	1.25	.42	.51	.71
MAX	9.2	4.6	6.0	7.1	7.0	5.6	6.2	2.5	1.7	.96	.80	2.9
MIN	1.4	2.5	2.4	2.5	2.3	3.0	2.4	1.5	.94	.00	.04	.46
CFSM	1.11	1.08	1.10	1.14	1.02	1.25	1.16	.66	.44	.15	.18	.25
IN.	1.28	1.21	1.26	1.31	1.06	1.44	1.29	.77	.49	.17	.21	.28

CAL YR 1976 TOTAL 1230.38 MEAN 3.36 MAX 34 MIN .35 CFSM 1.19 IN 16.17
WTR YR 1977 TOTAL 820.30 MEAN 2.25 MAX 9.2 MIN .00 CFSM .80 IN 10.78

01484100 BEAVERDAM BRANCH AT HOUSTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	AIR TEMPER-ATURE (DEG C)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT							
01...	1455	4.4	121	5.7	18.0	16.5	--
NOV							
15...	1600	3.0	89	6.4	5.5	9.0	4.9
DEC							
08...	1040	5.0	93	7.5	-2.0	7.0	8.2
JAN							
18...	1120	3.3	79	6.6	-3.5	2.5	--
FEB							
15...	1435	2.5	69	6.0	6.5	10.5	--
APR							
08...	1425	3.6	99	7.2	12.0	17.0	8.4
MAY							
13...	1220	2.0	108	7.2	27.0	17.0	--
JUN							
22...	1035	1.2	172	6.9	22.5	16.0	--
AUG							
17...	1620	.76	160	6.6	25.0	23.0	7.3
SEP							
12...	1530	.79	68	6.9	27.0	18.5	7.9

01484270 BEAVERDAM CREEK NEAR MILTON, DE

LOCATION.--Lat 38°45'41", long 75°16'03", Sussex County, Hydrologic Unit 02040207, on left bank, 15 ft (5 m) upstream from culvert on state road (maintenance No. 88), 2.3 mi (3.7 km) east of Milton, and 3.2 mi (5.1 km) upstream from mouth.

DRAINAGE AREA.--6.10 mi² (15.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1955-71, and annual maximums, water years 1966-71. May 1971 to current year.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 0.91 ft (0.28 m) above mean sea level. Prior to Jan. 14, 1966, nonrecording gage at same site at different datum. Jan. 14, 1966, to April 1971 nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--6 years, 11.4 ft³/s (0.323 m³/s), 25.38 in/yr (645 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47 ft³/s (1.33 m³/s) Aug. 9, 1976, gage height, 4.67 ft (1.423 m); minimum, 4.1 ft³/s (0.12 m³/s) Sept. 19, 20, 1977.

EXTREMES FOR PERIOD MAY 1971 TO SEPTEMBER 1977.--Peak discharges above base of 26 ft³/s (0.74 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 16, 1971	1215	27	0.76	4.05	1.234	Aug. 28, 1971	0515	34	0.96	4.28	1.305
June 18, 1972	1730	*43	1.22	4.55	1.387	June 23, 1972	1845	31	0.88	4.17	1.271
Dec. 22, 1972	1545	29	0.82	4.11	1.253	Aug. 22, 1973	0730	*42	1.19	4.54	1.384
Feb. 2, 1973	2300	33	0.93	4.26	1.298						
June 2, 1974	1800	*23	0.65	3.90	1.189	June 21, 1974	2330	*23	0.65	3.88	1.183
Mar. 19, 1975	1915	27	0.76	4.04	1.231	Apr. 25, 1975	1945	31	0.88	4.17	1.271
Apr. 3, 1975	1230	*32	0.91	4.23	1.289	July 13, 1975	1445	31	0.88	4.18	1.274
Nov. 13, 1975	0200	27	0.76	4.03	1.228	Feb. 2, 1976	0415	28	0.79	4.07	1.241
Dec. 31, 1975	2330	29	0.82	4.12	1.256	Aug. 9, 1976	2045	*47	1.33	4.67	1.423
Oct. 3, 1976	0730	30	0.85	4.14	1.262	Dec. 7, 1976	1145	27	0.76	4.03	1.228
Oct. 9, 1976	0115	30	0.85	4.15	1.265	Jan. 10, 1977	1300	29	0.82	4.12	1.256
Oct. 20, 1976	1930	*34	0.96	4.28	1.305	Sept. 9, 1977	2345	27	0.76	4.03	1.228

May to September 1971: Minimum discharge during period, 7.0 ft³/s (0.20 m³/s) Sept. 7, 8, 20, 21, 28, 29, 1971.

Water year 1972: Minimum discharge, 6.8 ft³/s (0.19 m³/s) Oct. 18, 19, 1971.

Water year 1973: minimum discharge, 8.2 ft³/s (0.23 m³/s) July 30, 31, Aug. 1, 13, 1973.

Water year 1974: Minimum discharge, 5.8 ft³/s (0.16 m³/s) Sept. 23, 24, 1974.

Water year 1975: Minimum discharge, 5.6 ft³/s (0.16 m³/s) Nov. 5, 6, 11, 12, 25, 1974.

Water year 1976: Minimum discharge, 5.2 ft³/s (0.51 m³/s) Sept. 7, 8, 1976.

Water year 1977: Minimum discharge, 4.1 ft³/s (0.12 m³/s) Sept. 19, 20, 1977.

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, MAY 1971 TO SEPTEMBER 1971
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								15	13	9.8	9.0	8.0
2								14	12	13	8.1	7.9
3								15	13	11	7.8	7.7
4								15	12	10	8.6	8.1
5								14	11	9.4	10	8.2
6								14	11	9.0	9.0	8.0
7								13	11	9.2	8.3	7.4
8								14	11	9.2	7.9	7.1
9								14	11	8.8	7.6	7.3
10								12	11	8.6	7.6	7.4
11								12	11	9.0	7.8	7.5
12								12	11	9.0	9.0	9.0
13								13	11	9.8	8.1	12
14								16	10	10	7.9	9.3
15								14	11	9.2	7.6	8.1
16								22	11	8.3	7.4	7.7
17								20	11	8.6	7.4	8.3
18								15	10	8.3	7.4	8.3
19								14	10	8.8	9.0	7.6
20								12	10	9.8	9.0	7.1
21								12	9.8	10	8.3	7.2
22								13	9.8	9.8	8.1	7.4
23								12	10	9.2	7.8	7.6
24								11	10	9.8	7.4	7.5
25								11	10	11	7.6	7.3
26								11	10	9.6	7.6	7.4
27								11	11	8.1	12	7.3
28								11	10	7.6	28	7.1
29								11	9.6	7.6	14	7.2
30								17	9.8	9.2	8.8	7.4
31								15	---	8.1	8.1	---
TOTAL								425	322.0	288.8	282.2	235.4
MEAN								13.7	10.7	9.32	9.10	7.85
MAX								22	13	13	28	12
MIN								11	9.6	7.6	7.4	7.1
CFSM								2.25	1.75	1.53	1.49	1.29
IN.								2.59	1.96	1.76	1.72	1.44

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	9.0	10	9.9	12	16	15	14	19	23	14	12
2	8.2	9.1	9.9	9.9	13	16	14	14	16	20	13	19
3	7.8	11	9.7	9.8	15	19	14	16	15	17	13	21
4	7.2	11	9.9	11	16	19	15	20	14	17	13	15
5	7.2	10	9.5	15	13	17	15	17	13	17	17	13
6	9.9	9.8	9.3	13	13	16	14	16	14	19	16	13
7	8.0	9.6	15	11	13	16	15	15	15	18	14	13
8	7.5	9.1	15	11	13	16	16	14	14	17	13	12
9	7.4	9.1	11	10	13	16	15	19	13	16	13	12
10	11	9.6	11	12	13	16	14	19	13	16	13	11
11	9.5	9.7	11	12	13	16	14	16	13	16	13	11
12	7.7	9.8	10	12	13	15	14	15	12	16	13	11
13	7.5	11	9.8	12	17	15	18	15	12	19	16	11
14	7.5	9.8	10	13	16	15	20	15	15	19	17	11
15	7.4	9.1	11	11	15	16	16	22	14	17	15	12
16	7.4	8.8	11	10	14	15	15	20	13	15	14	11
17	7.3	8.6	11	10	15	18	17	18	13	17	13	11
18	6.9	8.9	11	11	16	20	16	16	28	21	13	10
19	7.0	9.2	10	12	18	17	15	17	36	20	13	11
20	7.2	9.3	12	12	17	15	15	20	24	16	12	11
21	7.4	8.9	12	12	14	16	15	19	19	16	12	12
22	7.4	8.8	11	12	14	16	17	17	23	15	12	12
23	7.6	8.8	11	11	15	16	20	17	27	14	12	11
24	17	9.5	10	11	17	15	17	16	27	14	12	10
25	12	16	10	12	17	15	16	16	24	14	12	10
26	16	12	10	12	21	15	16	16	20	14	12	10
27	13	11	10	12	20	15	15	15	19	14	12	11
28	11	11	10	13	18	15	15	15	18	14	13	12
29	9.7	10	10	12	17	15	15	14	21	14	13	11
30	9.6	10	10	12	---	15	14	14	24	14	12	12
31	9.4	---	10	12	---	15	---	16	---	14	12	---
TOTAL	277.3	297.5	331.1	358.6	441	497	467	513	548	513	412	362
MEAN	8.95	9.92	10.7	11.6	15.2	16.0	15.6	16.5	18.3	16.5	13.3	12.1
MAX	17	16	15	15	21	20	20	22	36	23	17	21
MIN	6.9	8.6	9.3	9.8	12	15	14	14	12	14	12	10
CFSM	1.47	1.63	1.75	1.90	2.49	2.62	2.56	2.71	3.00	2.71	2.18	1.98
IN.	1.69	1.81	2.02	2.19	2.69	3.03	2.85	3.13	3.34	3.13	2.51	2.21

WTR YR 1972 TOTAL 5017.5 MEAN 13.7 MAX 36 MIN 6.9 CFSM 2.25 IN 30.59

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	18	18	16	16	16	15	12	11	11	11
2	10	11	17	17	24	16	17	15	12	10	12	12
3	10	11	15	17	32	17	16	16	12	11	12	12
4	10	11	14	20	30	19	16	18	12	12	10	11
5	11	11	14	20	22	19	16	16	11	10	9.2	10
6	11	9.9	15	18	20	17	16	15	11	10	8.6	10
7	22	10	15	17	21	17	15	14	11	9.9	8.7	11
8	18	16	15	16	20	17	21	14	12	9.5	9.0	10
9	13	18	18	17	21	17	19	16	11	9.3	9.1	9.9
10	12	15	17	17	20	17	20	16	10	9.2	9.0	9.7
11	11	13	16	17	19	16	17	15	9.6	11	9.0	10
12	11	12	15	17	18	16	17	14	9.8	10	8.6	10
13	11	12	15	16	18	16	16	13	10	9.9	8.4	10
14	11	15	15	16	19	15	16	13	10	9.4	10	12
15	11	16	17	16	20	15	15	13	9.8	10	11	14
16	10	14	19	15	21	16	15	13	10	10	10	11
17	11	13	17	15	20	17	15	13	12	9.4	9.5	10
18	11	13	15	15	19	15	15	14	16	9.2	9.4	10
19	13	12	16	17	18	15	15	13	15	9.2	9.2	11
20	13	18	16	18	19	15	15	14	13	9.2	8.9	10
21	12	17	16	16	19	15	15	14	12	9.2	10	10
22	11	15	25	17	19	16	15	13	12	9.6	35	10
23	11	14	28	18	18	15	15	13	12	9.2	26	10
24	11	13	24	16	18	15	16	14	11	8.9	14	9.7
25	10	13	20	16	17	14	14	15	11	8.9	12	9.8
26	10	17	19	15	17	16	16	14	11	8.9	11	10
27	10	17	19	17	17	20	19	14	11	8.9	11	10
28	12	15	19	17	17	18	19	13	11	8.8	11	10
29	12	15	18	20	---	16	16	13	11	8.6	11	11
30	11	15	18	18	---	15	15	12	11	8.3	11	13
31	10	---	18	17	---	16	---	12	---	8.2	11	---
TOTAL	361	412.9	543	526	559	504	488	437	342.2	296.7	355.6	318.1
MEAN	11.6	13.8	17.5	17.0	20.0	16.3	16.3	14.1	11.4	9.57	11.5	10.6
MAX	22	18	28	20	32	20	21	18	16	12	35	14
MIN	10	9.9	14	15	16	14	14	12	9.6	8.2	8.4	9.7
CFSM	1.90	2.26	2.87	2.70	3.28	2.67	2.67	2.31	1.87	1.57	1.89	1.74
IN.	2.20	2.52	3.31	3.21	3.41	3.07	2.98	2.66	2.09	1.81	2.17	1.94

CAL YR 1972 TOTAL 5428.5 MEAN 14.8 MAX 36 MIN 9.8 CFSM 2.43 IN 33.10
WTR YR 1973 TOTAL 5143.5 MEAN 14.1 MAX 35 MIN 8.2 CFSM 2.31 IN 31.36

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	8.2	7.4	15	10	10	13	11	11	9.8	7.2	7.6
2	11	8.0	7.0	12	10	9.8	12	11	16	9.8	7.2	7.2
3	12	7.8	7.0	11	10	9.8	13	17	16	9.6	7.9	7.9
4	11	7.8	7.0	13	10	9.8	13	14	12	9.4	7.4	11
5	10	8.6	7.4	12	10	9.6	13	11	11	9.0	7.8	8.6
6	9.8	8.4	7.4	10	10	9.6	13	11	11	9.4	7.4	8.3
7	9.4	8.0	7.4	11	12	9.6	12	12	11	9.0	12	9.8
8	9.2	8.0	7.4	11	11	9.4	12	11	11	8.8	10	8.1
9	9.4	8.8	8.0	12	11	9.4	13	11	10	9.0	11	7.4
10	9.4	8.4	11	12	10	9.2	13	11	10	9.2	13	7.8
11	9.4	8.0	15	12	10	9.0	12	11	10	9.2	8.3	7.8
12	9.2	7.8	12	11	10	10	12	11	10	9.2	7.5	7.8
13	9.0	7.8	11	10	11	10	12	11	10	9.0	7.7	7.8
14	8.6	7.8	10	10	11	9.0	12	11	9.8	8.3	8.0	7.6
15	7.8	7.8	11	11	10	9.0	12	10	9.8	8.3	8.2	7.2
16	7.6	7.8	10	11	10	10	11	10	9.8	8.8	7.8	7.0
17	7.8	7.6	11	11	12	12	11	10	9.8	8.6	7.8	7.4
18	8.0	7.4	12	11	10	13	11	13	9.8	8.6	7.4	7.6
19	8.0	7.4	11	11	10	11	12	11	9.8	8.8	7.2	7.2
20	8.0	7.4	11	10	11	11	11	10	9.8	8.6	7.4	7.2
21	8.0	7.6	14	10	10	12	11	10	11	8.3	7.6	7.0
22	7.6	7.6	15	11	11	12	11	10	16	7.8	8.3	6.4
23	7.4	7.6	14	11	11	12	13	10	12	7.9	12	6.2
24	7.6	7.4	11	10	9.8	11	12	11	11	8.3	9.0	6.2
25	8.0	7.6	10	11	10	10	12	12	10	8.6	7.6	6.6
26	8.0	7.4	10	11	10	10	11	10	10	8.6	7.2	6.8
27	8.0	7.4	9.0	10	10	10	11	11	10	8.6	7.6	6.6
28	8.6	8.2	9.2	10	10	11	11	11	12	7.6	7.8	7.6
29	9.2	9.0	9.4	10	---	11	10	10	12	7.6	7.8	8.3
30	9.4	7.8	9.6	10	---	16	11	11	9.8	7.6	7.8	6.6
31	8.8	---	11	10	---	16	---	11	---	7.6	7.8	---
TOTAL	275.2	236.4	313.2	341	290.8	331.2	356	345	331.4	268.9	258.7	226.6
MEAN	8.88	7.88	10.1	11.0	10.4	10.7	11.9	11.1	11.0	8.67	8.35	7.55
MAX	12	9.0	15	15	12	16	13	17	16	9.8	13	11
MIN	7.4	7.4	7.0	10	9.8	9.0	10	10	9.8	7.6	7.2	6.2
CFSM	1.46	1.29	1.66	1.80	1.71	1.75	1.95	1.82	1.80	1.42	1.37	1.24
IN.	1.68	1.44	1.91	2.08	1.77	2.02	2.17	2.10	2.02	1.64	1.58	1.38

CAL YR 1973 TOTAL 4651.4 MEAN 12.7 MAX 35 MIN 7.0 CFSM 2.08 IN 28.36
WTR YR 1974 TOTAL 3574.4 MEAN 9.79 MAX 17 MIN 6.2 CFSM 1.61 IN 21.79

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	6.6	6.4	7.8	8.6	10	12	17	18	10	12	11
2	7.0	6.6	8.1	6.8	8.8	11	12	17	18	11	11	13
3	7.0	6.2	6.6	7.0	8.8	10	20	16	15	11	11	11
4	7.0	6.0	6.4	7.8	8.4	9.4	19	18	14	10	12	11
5	7.0	5.8	6.2	7.8	12	9.4	15	18	14	10	16	11
6	6.4	6.0	6.2	7.4	10	10	14	18	16	10	15	11
7	6.2	6.6	6.2	7.8	11	10	13	17	15	11	20	11
8	6.4	6.4	11	6.8	10	9.8	13	16	13	10	15	12
9	6.6	6.4	7.8	8.2	9.4	9.8	13	15	12	11	13	11
10	6.8	6.0	6.8	7.6	8.8	11	13	15	13	13	13	11
11	6.6	5.6	6.8	9.2	9.0	11	13	15	12	16	12	11
12	6.8	5.8	7.2	7.8	10	11	13	15	14	16	12	12
13	6.2	6.4	7.0	12	10	11	13	16	15	20	12	15
14	6.0	6.6	7.9	9.6	14	16	13	16	12	26	13	11
15	6.0	6.4	6.8	8.2	12	16	20	16	12	19	12	10
16	12	6.4	11	8.6	9.8	12	22	15	12	19	12	11
17	9.6	6.0	8.6	9.2	10	15	17	15	13	19	13	11
18	7.2	5.8	7.8	9.4	10	13	15	15	12	16	12	11
19	7.0	6.2	7.4	8.6	9.4	17	15	15	12	15	12	11
20	6.4	6.4	7.4	9.8	9.0	19	16	14	14	14	12	9.9
21	6.0	6.4	8.0	8.6	8.8	15	14	13	11	20	12	9.4
22	6.4	6.2	7.0	8.2	8.6	13	14	19	10	16	12	9.4
23	6.8	6.2	6.6	8.2	9.0	13	14	16	10	14	11	14
24	6.8	6.0	7.0	8.4	10	13	14	14	11	14	11	19
25	6.6	5.8	6.8	9.8	11	13	18	14	11	14	10	16
26	6.6	6.4	6.4	8.8	9.8	13	24	13	11	15	11	14
27	6.2	6.4	6.8	8.2	9.6	12	17	13	11	13	11	14
28	6.0	6.2	7.2	8.8	9.8	12	16	14	12	12	11	12
29	5.8	5.8	6.8	8.8	---	12	16	13	11	13	11	12
30	6.2	6.0	6.6	8.2	---	14	16	13	11	13	11	11
31	6.4	---	7.2	8.4	---	13	---	14	---	12	11	---
TOTAL	210.6	185.6	226.0	261.8	275.6	384.4	464	475	385	443	382	356.7
MEAN	6.79	6.19	7.29	8.45	9.84	12.4	15.5	15.3	12.8	14.3	12.3	11.9
MAX	12	6.6	11	12	14	19	24	19	18	26	20	19
MIN	5.8	5.6	6.2	6.8	8.4	9.4	12	13	10	10	10	9.4
CFSM	1.11	1.02	1.20	1.39	1.61	2.03	2.54	2.51	2.10	2.34	2.02	1.95
IN.	1.28	1.13	1.38	1.60	1.68	2.34	2.83	2.90	2.35	2.70	2.33	2.17

CAL YR 1974 TOTAL 3371.8 MEAN 9.24 MAX 17 MIN 5.6 CFSM 1.52 IN 20.56
WTR YR 1975 TOTAL 4049.7 MEAN 11.1 MAX 26 MIN 5.6 CFSM 1.82 IN 24.69

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.8	12	23	16	15	15	14	8.4	8.0	6.4	6.2
2	11	10	12	18	24	14	14	15	9.0	7.4	6.2	6.2
3	11	9.8	12	16	19	14	14	13	10	7.6	6.0	6.4
4	9.6	9.2	12	16	19	14	14	12	10	7.2	6.0	6.0
5	9.4	9.6	12	14	18	14	15	12	10	6.8	6.0	6.0
6	9.4	9.6	11	13	17	14	14	12	9.4	6.6	6.0	6.0
7	9.6	11	11	15	17	14	14	12	8.6	6.8	6.0	5.6
8	9.8	9.8	11	19	17	14	13	12	9.0	7.4	8.4	5.4
9	11	8.8	12	17	16	14	13	10	9.8	7.2	17	5.6
10	11	8.8	12	15	16	16	13	10	9.6	7.0	26	6.8
11	10	12	12	14	16	16	13	11	9.6	13	11	6.8
12	9.6	11	12	14	16	15	12	9.8	9.4	9.0	8.6	6.0
13	9.2	24	11	14	15	15	13	11	9.0	8.2	7.8	5.4
14	9.0	17	11	15	15	14	13	11	8.4	7.8	7.0	5.7
15	9.4	13	11	15	15	14	13	11	9.0	8.0	6.6	6.1
16	9.6	12	12	14	16	14	13	10	9.0	8.0	7.0	6.5
17	10	11	11	15	15	16	13	9.4	11	7.6	6.6	6.7
18	13	11	11	13	15	15	14	11	9.6	7.0	6.6	6.5
19	18	12	11	13	15	14	13	12	8.0	6.6	6.6	6.3
20	13	11	11	15	15	14	13	10	8.6	6.4	6.4	6.2
21	11	12	11	15	15	14	13	10	10	6.4	6.4	6.2
22	11	13	11	15	16	13	12	9.6	8.6	6.6	6.4	6.2
23	10	12	11	14	16	13	13	9.6	8.2	6.8	6.2	6.2
24	9.8	12	10	14	15	13	13	9.6	8.2	8.0	6.0	6.2
25	11	12	10	14	15	14	12	8.6	8.0	8.0	6.4	6.2
26	10	12	14	14	15	14	12	8.8	8.0	6.6	6.4	10
27	10	12	14	18	15	14	13	9.4	7.6	6.4	6.6	7.0
28	9.6	12	12	23	15	13	13	9.2	7.0	6.2	7.6	7.1
29	9.0	12	10	20	15	13	13	9.6	7.4	6.2	6.4	6.5
30	9.8	11	11	17	---	13	13	10	8.2	8.0	5.6	8.9
31	10	---	16	16	---	13	---	9.6	---	7.0	5.6	---
TOTAL	324.8	350.4	360	488	469	437	396	332.2	266.6	229.8	237.8	192.9
MEAN	10.5	11.7	11.6	15.7	16.2	14.1	13.2	10.7	8.89	7.41	7.67	6.43
MAX	18	24	16	23	24	16	15	15	11	13	26	10
MIN	9.0	8.8	10	13	15	13	12	8.6	7.0	6.2	5.6	5.4
CFSM	1.72	1.92	1.90	2.57	2.66	2.31	2.16	1.75	1.46	1.22	1.26	1.05
IN.	1.98	2.14	2.20	2.98	2.86	2.66	2.41	2.03	1.63	1.40	1.45	1.18

CAL YR 1975 TOTAL 4462.7 MEAN 12.2 MAX 26 MIN 6.8 CFSM 2.00 IN 27.21
WTR YR 1976 TOTAL 4084.5 MEAN 11.2 MAX 26 MIN 5.4 CFSM 1.84 IN 24.90

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	8.8	8.9	9.2	9.4	9.3	8.4	8.7	7.2	6.6	5.3	5.3
2	8.4	8.8	8.8	9.2	9.5	8.9	9.8	8.0	7.2	6.5	5.5	5.2
3	22	8.8	8.7	9.0	9.4	8.8	10	9.2	7.2	6.4	5.8	5.1
4	14	8.9	8.6	9.3	9.7	9.1	9.4	9.2	7.1	5.9	5.8	4.9
5	8.1	9.0	8.6	9.3	9.5	9.5	12	9.9	6.6	5.7	5.4	4.8
6	7.7	9.0	8.2	9.3	9.2	8.8	12	11	6.5	5.9	5.4	4.9
7	7.4	8.1	16	9.6	8.8	8.4	11	10	6.8	6.8	5.2	4.8
8	7.3	7.7	14	9.5	8.8	8.3	11	8.9	6.7	6.5	4.9	4.9
9	17	8.4	11	9.2	8.8	8.1	9.8	8.0	8.1	6.4	5.0	9.9
10	8.7	8.9	9.7	20	9.0	8.4	9.4	8.0	9.5	6.5	5.1	16
11	7.7	9.0	9.6	13	9.3	8.5	9.2	8.2	8.4	6.0	5.1	8.4
12	7.4	9.3	9.6	11	9.5	8.3	9.8	8.2	7.2	6.3	5.0	5.3
13	7.4	9.3	9.0	9.8	10	8.5	8.6	8.2	6.1	9.2	4.9	4.8
14	7.6	9.3	8.9	11	9.3	8.6	9.0	8.1	6.4	6.0	6.0	5.1
15	7.7	8.9	9.4	16	9.1	8.3	9.2	7.7	6.9	6.1	7.6	5.0
16	7.8	8.5	9.9	12	9.0	8.1	9.1	7.3	7.0	5.8	5.6	4.9
17	8.5	8.3	10	10	8.8	8.1	8.4	7.8	6.9	5.8	6.4	5.0
18	8.4	8.5	10	9.8	8.7	9.1	8.1	7.9	7.1	5.8	7.0	4.7
19	7.9	8.6	9.5	10	8.3	9.0	9.6	7.9	6.6	5.3	6.0	4.2
20	17	8.6	10	9.5	8.1	8.5	9.6	7.8	6.2	5.4	6.0	4.4
21	18	8.6	11	9.7	8.1	8.3	9.4	7.2	6.5	6.0	5.7	4.7
22	11	8.5	9.5	10	8.3	12	9.5	6.8	6.5	5.8	5.1	4.8
23	8.7	8.4	9.4	10	8.5	11	9.5	6.6	6.7	5.8	5.3	4.8
24	8.8	9.1	9.5	10	10	9.4	9.0	6.6	6.6	5.3	5.8	4.8
25	8.8	9.3	9.2	10	13	8.8	9.3	7.8	6.9	5.3	6.4	4.8
26	11	8.5	11	10	10	8.4	11	9.3	6.7	5.9	5.7	4.8
27	9.2	8.1	9.6	10	10	8.4	9.8	8.2	5.8	5.6	5.6	4.8
28	8.7	8.2	9.3	10	11	8.4	9.3	7.8	7.3	5.7	5.7	4.8
29	8.6	12	9.6	9.9	---	9.2	9.8	6.7	10	5.3	5.4	4.8
30	8.6	9.7	9.4	9.6	---	9.4	9.3	6.3	7.1	6.0	5.1	4.8
31	9.5	---	9.3	9.6	---	8.8	---	6.7	---	6.0	5.5	---
TOTAL	313.9	265.1	305.2	324.5	261.1	274.7	289.3	250.0	211.8	187.6	174.3	165.5
MEAN	10.1	8.84	9.85	10.5	9.33	8.86	9.64	8.06	7.06	6.05	5.62	5.52
MAX	22	12	16	20	13	12	12	11	10	9.2	7.6	16
MIN	7.3	7.7	8.2	9.0	8.1	8.1	8.1	6.3	5.8	5.3	4.9	4.2
CFSM	1.66	1.45	1.62	1.72	1.53	1.45	1.58	1.32	1.16	.99	.92	.91
IN.	1.91	1.62	1.86	1.98	1.59	1.67	1.76	1.52	1.29	1.14	1.06	1.01

CAL YR 1976 TOTAL 3933.5 MEAN 10.7 MAX 26 MIN 5.4 CFSM 1.75 IN 23.98
WTR YR 1977 TOTAL 3023.0 MEAN 8.28 MAX 22 MIN 4.2 CFSM 1.36 IN 18.43

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT										
03...	1315	10	153	7.0	14.5	13.0	--	8.5	--	--
20...	1235	13	136	6.6	14.5	14.5	--	5.3	--	--
NOV										
12...	1415	9.8	169	6.7	19.5	--	--	--	--	--
JAN										
01...	1315	26	132	6.1	4.0	6.0	--	7.2	--	--
14...	1150	16	107	7.1	7.5	7.0	--	--	--	--
MAR										
01...	1225	15	142	6.3	21.0	8.0	--	8.3	--	--
31...	1455	13	170	6.5	10.5	11.5	5	6.6	21	21
MAY										
18...	1515	11	182	6.5	23.0	19.5	--	7.0	--	--
JUN										
29...	1545	7.6	138	6.2	28.0	23.0	--	6.2	--	--
SEP										
13...	1200	5.2	162	5.6	32.0	10.0	5	--	20	8

DATE	TOTAL ACIDITY AS H+ (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT									
03...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
NOV									
12...	--	--	--	--	--	--	--	--	--
JAN									
01...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
31...	.5	4.5	2.3	13	3.9	0	12	17	.1
MAY									
18...	--	--	--	--	--	--	--	--	--
JUN									
29...	--	--	--	--	--	--	--	--	--
SEP									
13...	--	4.7	2.0	11	3.1	15	6.3	14	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT									
03...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
NOV									
12...	--	--	--	--	--	--	--	--	--
JAN									
01...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
31...	16	--	69	3.9	.36	220	--	30	--
MAY									
18...	--	--	--	--	--	--	--	--	--
JUN									
29...	--	--	--	--	--	--	--	--	--
SEP									
13...	19	92	68	4.7	.34	260	50	30	10

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV									
04...	1150	8.7	224	5.9	18.5	11.5	--	--	--
JAN									
20...	1020	9.5	47	6.4	-2.0	4.5	--	--	--
FEB									
14...	1355	9.5	136	6.3	11.0	10.0	--	--	--
22...	1140	8.2	148	6.4	10.5	10.5	10	7.9	18
APR									
01...	1500	8.0	157	6.6	16.0	18.0	--	--	--
13...	1105	8.5	259	6.3	30.0	18.0	--	5.1	--
19...	0950	10	240	6.4	26.5	16.0	--	5.3	--
MAY									
09...	1230	7.9	118	6.3	12.0	12.5	--	7.1	--
JUN									
22...	1250	6.8	323	6.3	24.0	20.0	--	--	--
AUG									
03...	1315	5.9	135	5.8	23.5	19.0	--	5.6	--
SEP									
13...	1100	4.7	144	6.5	26.5	16.0	5	5.4	23

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV									
04...	--	--	--	--	--	--	--	--	--
JAN									
20...	--	--	--	--	--	--	--	--	--
FEB									
14...	--	--	--	--	--	--	--	--	--
22...	12	4.3	1.8	13	3.6	8	8.1	16	.0
APR									
01...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
MAY									
09...	--	--	--	--	--	--	--	--	--
JUN									
22...	--	--	--	--	--	--	--	--	--
AUG									
03...	--	--	--	--	--	--	--	--	--
SEP									
13...	7	5.4	2.3	24	3.7	20	13	13	.0

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
NOV									
04...	--	--	--	--	--	--	--	--	--
JAN									
20...	--	--	--	--	--	--	--	--	--
FEB									
14...	--	--	--	--	--	--	--	--	--
22...	18	113	69	3.3	.51	310	70	10	20
APR									
01...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
MAY									
09...	--	--	--	--	--	--	--	--	--
JUN									
22...	--	--	--	--	--	--	--	--	--
AUG									
03...	--	--	--	--	--	--	--	--	--
SEP									
13...	19	93	91	2.9	.16	1100	720	60	60

01484300 SOWBRIDGE BRANCH NEAR MILTON, DE

LOCATION.--Lat 38°48'51", long 75°19'39", Sussex County, Hydrologic Unit 02040207, on left bank at downstream side of highway bridge, 0.7 mi (1.1 km) upstream from mouth, 1 mi (1.6 km) downstream from Reynolds Pond, and 2.5 mi (4.0 km) north of Milton.

DRAINAGE AREA.--7.08 mi^2 (18.34 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Concrete control since Oct. 28, 1968. Datum of gage is 3.43 ft (1.045 m) above mean sea level.

REMARKS.--Water-discharge records good. Flow regulated by Reynolds Pond.

AVERAGE DISCHARGE.--21 years, 9.95 ft^3/s (0.282 m^3/s), 19.08 in/yr (485 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 134 ft^3/s (3.79 m^3/s) Aug. 5, 1967, gage height, 6.33 ft (1.929 m); minimum, 0.47 ft^3/s (0.013 m^3/s) Feb. 10, 1969, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21 ft^3/s (0.59 m^3/s) Jan. 17, gage height, 5.07 ft (1.545 m); minimum, 1.0 ft^3/s (0.028 m^3/s) Sept. 23, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	11	10	9.4	11	7.1	6.2	4.8	3.5	3.0	2.5
2	13	11	11	8.0	9.1	11	7.1	6.1	4.8	3.2	3.4	2.2
3	13	11	10	7.7	9.1	10	8.1	6.0	5.0	2.9	3.4	2.1
4	13	11	9.2	7.9	9.1	9.6	8.5	6.1	4.7	2.9	3.2	2.0
5	13	11	8.9	8.4	9.1	9.6	9.3	6.2	4.2	2.8	2.8	2.1
6	11	11	8.6	8.6	9.1	9.6	10	6.5	4.1	2.9	2.6	2.4
7	10	11	9.6	8.6	8.6	9.3	9.9	6.9	4.5	3.4	2.4	3.4
8	8.9	11	12	8.6	8.2	9.1	9.1	6.8	4.4	3.8	2.2	3.3
9	9.9	10	12	8.6	8.1	8.8	8.3	6.3	4.6	3.7	2.0	3.7
10	11	10	12	11	7.8	8.6	7.8	5.5	6.9	3.6	1.8	8.8
11	10	10	12	16	7.9	8.6	7.7	5.5	7.1	3.4	1.7	8.3
12	9.8	10	11	16	8.1	8.6	7.4	5.5	6.2	3.3	1.7	6.2
13	8.9	10	11	14	8.3	8.6	7.3	5.5	5.3	3.5	1.5	4.5
14	8.3	10	10	13	8.6	8.6	7.0	5.2	4.8	3.6	1.7	3.4
15	7.7	10	10	15	8.6	8.6	6.9	4.8	4.8	3.6	2.2	2.8
16	7.6	9.9	10	17	8.6	8.6	6.9	4.8	4.5	3.3	2.3	2.6
17	7.5	9.6	10	19	8.2	8.4	6.8	4.8	4.5	2.9	2.5	2.9
18	8.1	9.6	9.6	16	8.1	8.3	6.5	4.8	4.4	2.7	2.7	5.9
19	8.3	9.6	9.6	14	7.8	8.6	6.5	4.5	4.5	2.7	2.7	5.8
20	9.7	9.1	9.6	12	7.7	9.1	6.5	4.7	4.2	2.9	2.6	5.3
21	16	9.2	10	11	7.7	9.1	6.5	4.5	4.3	3.5	2.5	6.7
22	16	10	10	11	7.7	9.4	6.5	4.5	4.1	3.1	2.5	2.0
23	16	11	10	11	7.7	10	6.3	4.5	3.8	2.7	2.7	1.9
24	14	11	10	11	8.1	10	6.1	4.5	3.6	2.6	3.1	2.7
25	13	10	9.6	10	12	9.3	6.1	4.7	3.6	2.5	5.0	5.1
26	13	9.9	9.9	10	12	8.8	6.4	6.0	3.9	2.6	4.5	4.1
27	13	9.6	10	10	11	8.4	6.7	6.1	4.1	2.6	3.8	4.2
28	13	9.1	10	10	11	8.1	6.5	5.5	3.9	2.6	3.3	4.0
29	12	10	10	11	---	7.9	6.5	4.8	4.0	2.7	3.0	3.8
30	12	11	10	10	---	7.7	6.5	4.8	3.8	2.8	2.8	3.2
31	12	---	9.9	9.7	---	7.5	---	4.8	---	3.1	2.6	---
TOTAL	351.7	307.6	316.5	[illegible]	246.7	278.8	218.8	167.4	137.4	95.4	84.2	117.9
MEAN	11.3	10.3	10.2	[illegible]	8.81	8.99	7.29	5.40	4.58	3.08	2.72	3.93
MAX	16	12	12	[illegible]	12	11	10	6.9	7.1	3.8	5.0	8.8
MIN	7.5	9.1	8.6	7.7	7.7	7.5	6.1	4.5	3.6	2.5	1.5	1.9
CFSM	1.60	1.46	1.44	1.61	1.24	1.27	1.03	.76	.65	.44	.38	.56
IN.	1.85	1.62	1.66	1.86	1.30	1.46	1.15	.88	.72	.50	.44	.62

CAL YR 1976 TOTAL 3540.1 MEAN 9.67 MAX 28 MIN 1.7 CFSM 1.37 IN 18.60
WTR YR 1977 TOTAL 2676.5 MEAN 7.33 MAX 19 MIN 1.5 CFSM 1.04 IN 14.06

01484300 SOWBRIDGE BRANCH NEAR MILTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV							
04...	1300	11	111	6.4	15.5	11.0	--
JAN							
19...	1250	14	41	6.6	-5.0	1.0	--
FEB							
14...	1505	8.4	85	7.1	9.5	8.0	--
APR							
06...	1210	10	140	7.4	11.5	12.5	11.9
MAY							
13...	1110	5.5	98	7.4	24.0	18.0	--
JUN							
22...	1335	4.0	275	7.0	26.0	24.0	--
AUG							
03...	1430	3.7	30	6.9	27.5	25.0	5.5
SEP							
12...	1310	6.4	89	6.4	26.5	20.0	8.0

01484500 STOCKLEY BRANCH AT STOCKLEY, DE

LOCATION.--Lat 38°38'19", long 75°20'31", Sussex County, Hydrologic Unit 02060010, on left bank at highway bridge in Stockley, 1.6 mi (2.6 km) upstream from mouth, and 4.4 mi (7.1 km) southeast of Georgetown.

DRAINAGE AREA.--5.24 mi² (13.57 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 24.54 ft (7.480 m) above mean sea level. Prior to Aug. 16, 1950, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--34 years, 6.90 ft³/s (0.195 m³/s), 17.88 in/yr (454 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132 ft³/s (3.74 m³/s) June 4, 1948, gage height, 5.0 ft (1.52 m), from graph based on gage readings, from rating curve extended above 50 ft³/s (1.42 m³/s); minimum observed, 0.13 ft³/s (0.004 m³/s) Sept. 1-11, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41 ft³/s (1.16 m³/s) Oct. 21, gage height, 2.84 ft (0.866 m), no peak above base of 45 ft³/s (1.2 m³/s); minimum, 0.58 ft³/s (0.016 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.3	3.0	4.7	4.8	7.5	4.4	3.5	2.1	1.4	.95	.80
2	2.5	4.0	3.0	4.4	4.6	6.8	5.1	3.4	2.0	1.4	.95	.84
3	5.3	3.8	2.8	4.3	4.9	6.4	5.2	3.2	1.9	1.4	.87	.84
4	2.5	3.7	2.8	4.5	5.2	6.6	4.9	3.2	1.9	1.3	.77	.84
5	2.0	3.4	2.8	4.3	5.3	7.1	9.3	3.7	1.9	1.3	.76	.99
6	1.9	3.5	2.7	4.3	4.6	6.6	8.2	3.4	2.0	1.4	.73	1.0
7	1.8	3.5	12	4.6	4.7	6.3	6.1	3.3	2.0	1.9	.70	1.2
8	1.7	3.4	9.6	4.1	4.6	6.1	5.6	2.9	1.8	1.4	.68	.99
9	10	3.2	6.1	4.0	4.5	5.9	5.1	2.7	2.2	1.4	.68	5.1
10	3.2	3.3	5.5	17	4.8	5.5	4.8	2.6	2.3	1.4	.69	9.2
11	2.3	3.3	5.4	11	4.9	5.4	4.8	2.5	2.0	1.4	.67	2.0
12	2.2	3.6	5.4	6.7	5.3	5.3	4.7	2.4	1.8	1.4	.66	1.5
13	2.1	3.5	5.2	6.2	6.0	5.7	4.6	2.3	1.8	1.7	.73	1.5
14	2.0	3.5	5.1	6.8	5.1	6.0	4.6	2.2	1.7	1.3	1.3	1.4
15	1.9	3.5	5.0	16	5.0	5.5	4.5	2.1	1.8	1.2	1.4	1.3
16	1.8	3.4	4.9	9.4	4.8	5.3	4.4	2.0	1.8	1.1	.99	1.3
17	2.1	3.3	5.0	7.0	4.6	5.0	4.3	2.1	1.8	1.1	1.1	1.4
18	2.2	3.3	4.7	6.0	4.5	5.6	4.2	2.1	1.8	1.1	1.1	1.3
19	1.9	3.3	4.5	5.6	4.3	5.6	4.1	2.0	1.7	1.1	.92	1.3
20	9.2	3.2	5.0	5.4	4.4	5.2	4.0	2.0	1.6	1.0	.93	1.3
21	16	3.0	6.8	5.4	4.3	5.0	3.8	2.0	1.6	1.0	.91	1.3
22	4.2	3.0	5.2	5.2	4.0	8.6	3.8	2.0	1.5	1.0	.89	1.2
23	3.6	2.8	5.1	5.2	4.1	8.8	3.8	2.0	1.4	1.0	.91	1.2
24	3.5	2.8	4.9	5.2	5.6	6.9	4.4	2.0	1.4	1.0	.96	1.2
25	3.9	2.8	4.7	5.4	9.6	6.1	6.2	3.1	1.4	1.0	1.0	1.2
26	6.3	2.8	6.4	5.4	6.8	5.4	5.2	3.5	1.4	1.1	.91	1.2
27	4.5	2.8	5.6	5.3	7.2	5.1	4.8	2.3	1.4	1.0	.86	1.2
28	3.8	2.9	5.4	5.3	9.3	5.1	4.3	2.1	1.7	.95	.84	1.3
29	3.7	5.0	5.4	5.2	---	5.1	4.3	2.0	2.7	.95	.84	1.2
30	3.7	3.4	5.0	4.8	---	5.0	3.7	2.1	1.5	.95	.83	1.1
31	4.8	---	5.0	4.9	---	4.8	---	2.2	---	.95	.83	---
TOTAL	120.6	101.3	160.0	193.6	147.8	185.3	147.2	78.9	53.9	37.60	27.36	48.20
MEAN	3.89	3.38	5.16	6.25	5.28	5.98	4.91	2.55	1.80	1.21	.88	1.61
MAX	16	5.0	12	17	9.6	8.8	9.3	3.7	2.7	1.9	1.4	9.2
MIN	1.7	2.8	2.7	4.0	4.0	4.8	3.7	2.0	1.4	.95	.66	.80
CFSM	.74	.65	.99	1.19	1.01	1.14	.94	.49	.34	.23	.17	.31
IN.	.86	.72	1.14	1.37	1.05	1.32	1.04	.56	.38	.27	.19	.34

CAL YR 1976 TOTAL 1960.95 MEAN 5.36 MAX 56 MIN .92 CFSM 1.02 IN 13.92

WTR YR 1977 TOTAL 1301.76 MEAN 3.57 MAX 17 MIN .66 CFSM .68 IN 9.24

01484500 STOCKLEY BRANCH AT STOCKLEY, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV 05...	1140	3.6	122	6.1	15.0	11.0	5.9
JAN 20...	1510	5.2	102	6.8	-.5	4.0	--
FEB 14...	1145	5.0	91	6.5	4.5	6.5	6.2
APR 06...	1435	7.7	93	7.0	12.0	11.5	11.4
MAY 09...	1030	2.6	102	7.0	12.5	11.5	9.4
JUN 21...	1520	1.7	205	6.5	26.0	20.0	--
AUG 03...	1045	.04	100	6.4	26.0	19.5	6.8
SEP 12...	1210	1.6	117	6.4	22.0	16.0	8.2

POCOMOKE RIVER BASIN

01485000 POCOMOKE RIVER NEAR WILLARDS, MD

LOCATION.--Lat 38°23'20", long 75°19'30", Worcester County, Hydrologic Unit 02060009, on left bank 30 ft (9 m) downstream from bridge on State Highway 346, 0.6 mi (1.0 km) upstream from Burnt Mill Branch, 1.3 mi (2.1 km) east of Willards, 1.3 mi (2.1 km) west of Whaleysville, and 50.3 mi (80.9 km) upstream from mouth.

DRAINAGE AREA.--60.5 mi² (156.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 13.95 ft (4.252 m) above mean sea level.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--27 years (water years 1951-77), 68.7 ft³/s (1.946 m³/s), 15.42 in/yr (392 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,000 ft³/s (28.3 m³/s) July 26, 1975, gage height, 12.00 ft (3.658 m); maximum gage height, 13.67 ft (4.167 m) June 30, 1972; minimum, 2.2 ft³/s (0.062 m³/s) Aug. 18, 19, 1957, gage height, 1.91 ft (0.582 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 21	0700	*640	18.1	10.27	3.130
Oct. 26	1500	560	15.9	9.65	2.941

Minimum discharge, 5.3 ft³/s (0.15 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	163	55	66	34	135	42	25	25	13	7.8	5.9
2	132	129	53	60	32	109	43	24	24	13	8.0	5.7
3	346	111	50	58	32	89	51	24	22	12	30	5.7
4	293	98	47	57	33	82	51	24	20	12	25	5.5
5	172	87	45	55	33	105	102	24	19	12	13	5.5
6	123	78	43	53	30	94	142	23	19	11	10	5.5
7	96	73	87	54	31	82	98	23	20	12	9.3	5.9
8	78	69	189	51	29	72	76	22	19	13	8.5	5.7
9	76	65	140	49	28	66	64	21	20	12	8.3	13
10	81	63	119	209	28	62	58	21	24	12	7.8	32
11	67	60	120	232	28	58	54	20	23	11	7.3	22
12	60	60	114	126	29	56	50	20	22	11	6.9	18
13	55	60	108	85	39	104	46	19	20	12	6.9	16
14	51	61	89	75	49	170	42	19	19	12	6.7	15
15	47	61	82	209	48	107	38	18	18	11	7.5	15
16	43	60	81	138	48	79	35	18	18	11	7.1	14
17	45	57	81	94	46	67	33	17	17	10	7.1	15
18	60	56	75	74	43	63	31	17	17	9.5	7.5	16
19	58	54	69	63	42	64	29	17	17	9.5	6.7	15
20	119	52	70	57	45	60	28	16	16	9.3	6.5	14
21	545	49	119	52	45	60	27	16	16	9.3	6.3	13
22	380	48	103	48	43	71	26	15	15	9.0	6.1	13
23	222	46	87	44	43	103	25	15	15	8.8	10	13
24	156	44	77	42	58	78	26	15	14	8.5	10	12
25	136	42	69	44	212	66	27	17	14	8.5	8.8	12
26	403	41	94	43	145	60	29	64	14	9.0	7.3	12
27	392	41	111	42	124	55	30	46	14	8.3	6.9	12
28	239	41	96	42	178	52	28	36	14	8.0	6.7	11
29	169	53	90	43	---	51	28	30	17	7.8	6.5	11
30	134	59	80	39	---	49	26	27	15	8.3	6.3	11
31	148	---	75	36	---	47	---	26	---	8.3	6.1	---
TOTAL	5080	1981	2718	2340	1575	2416	1385	719	547	322.1	278.9	370.4
MEAN	164	66.0	87.7	75.5	56.3	77.9	46.2	23.2	18.2	10.4	9.00	12.3
MAX	545	163	189	232	212	170	142	64	25	13	30	32
MIN	43	41	43	36	28	47	25	15	14	7.8	6.1	5.5
CFSM	2.71	1.09	1.45	1.25	.93	1.29	.76	.38	.30	.17	.15	.20
IN.	3.12	1.22	1.67	1.44	.97	1.49	.85	.44	.34	.20	.17	.23

CAL YR 1976	TOTAL 23632.0	MEAN 64.6	MAX 545	MIN 9.0	CFSM 1.07	IN 14.53
WTR YR 1977	TOTAL 19732.4	MEAN 54.1	MAX 545	MIN 5.5	CFSM .89	IN 12.13

01485000 POCOMOKE RIVER NEAR WILLARDS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	AIR TEMPER- ATURE (DEG C)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)
NOV							
15...	1200	59	151	6.2	6.5	6.5	4.4
JAN							
25...	1305	43	114	5.9	2.5	4.5	5.5
FEB							
17...	1400	43	94	6.6	-.5	3.5	--
MAR							
31...	1330	50	118	6.8	19.5	17.0	8.9
MAY							
16...	1100	17	109	7.1	20.5	13.5	8.6
JUN							
20...	1150	16	112	6.8	27.0	23.0	--
AUG							
15...	1155	8.3	231	7.0	31.5	24.5	7.1
SEP							
19...	1130	14	183	6.9	28.5	22.0	7.9

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD

LOCATION.--Lat 38°13'44", long 75°28'19", Worcester County, Hydrologic Unit 02060009, on right bank 15 ft (5 m) downstream from bridge on State Highway 12, 0.5 mi (0.8 km) upstream from Furnace Branch, 0.6 mi (1.0 km) downstream from Millville Creek, 5.5 mi (8.8 km) northwest of Snow Hill, and 7.3 mi (11.7 km) upstream from mouth.

DRAINAGE AREA.--44.9 mi² (116.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1949 to current year.

REVISED RECORDS.--WSP 1332: 1953.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 12.29 ft (3.746 m) above mean sea level.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--27 years (water years 1951-77), 51.6 ft³/s (1.461 m³/s), 15.61 in/yr (396 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s (37.4 m³/s) June 30, 1972, gage height, 7.63 ft (2.326 m); maximum gage height, 7.82 ft (2.384 m) Aug. 16, 1953; minimum discharge, 0.80 ft³/s (0.023 m³/s) Sept. 8, 9, 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s (7.9 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 22	1000	*463	13.1	6.31	1.923	Mar. 14	2400	304	8.61	5.57	1.698
Oct. 27	2400	382	10.8	5.96	1.817						

Minimum discharge, 1.4 ft³/s (0.040 m³/s) Sept. 6, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	136	51	58	29	179	36	18	8.4	2.9	2.1	1.6
2	136	133	53	53	28	154	34	16	7.1	2.5	2.4	1.5
3	225	129	44	40	27	121	34	17	5.9	2.3	2.4	1.5
4	251	114	36	37	27	100	38	18	4.9	2.2	2.5	1.5
5	226	95	33	36	30	106	61	23	4.2	2.1	3.6	1.5
6	165	79	31	35	29	104	105	35	5.5	2.1	4.2	1.4
7	113	64	57	35	28	99	139	33	10	2.4	2.8	1.6
8	77	53	116	33	24	87	129	29	7.2	2.8	2.2	1.6
9	60	45	160	33	22	72	92	23	19	2.2	2.0	9.1
10	47	40	168	86	23	59	64	19	30	2.4	1.9	15
11	40	37	148	161	27	50	50	16	23	2.5	1.8	8.6
12	40	36	129	241	30	44	42	14	15	2.4	1.7	5.3
13	38	37	123	212	45	80	38	12	9.7	3.5	1.7	3.7
14	34	38	112	120	53	256	35	9.7	7.2	4.0	3.0	2.6
15	28	40	98	117	60	264	32	8.4	6.3	3.0	4.7	2.2
16	25	44	86	131	57	193	30	7.5	6.0	2.4	3.3	1.9
17	28	45	84	157	45	144	28	6.9	5.4	2.1	2.8	2.4
18	38	46	80	154	39	117	28	6.4	6.1	2.0	3.2	2.7
19	37	43	74	97	36	113	26	5.8	5.6	1.9	2.9	2.3
20	68	39	71	63	39	112	23	6.1	4.4	1.8	2.6	1.9
21	272	36	103	42	40	113	23	5.8	3.9	1.8	2.3	1.7
22	445	33	118	36	37	116	21	5.2	3.4	1.7	2.1	1.6
23	356	32	125	33	39	138	18	4.9	3.0	1.7	2.1	1.6
24	219	30	104	31	49	141	22	4.6	2.8	1.7	2.2	1.6
25	153	29	80	31	117	126	26	12	2.7	1.8	2.6	1.6
26	194	28	99	31	163	100	26	35	2.7	2.0	2.2	1.6
27	338	28	118	33	175	69	27	26	2.6	1.9	2.0	1.5
28	348	28	125	35	180	54	25	17	2.4	1.8	1.9	1.5
29	232	38	120	37	---	47	23	12	3.5	1.8	1.8	1.4
30	167	44	100	36	---	42	21	9.3	3.8	1.9	1.8	1.4
31	139	---	84	33	---	39	---	9.0	---	1.9	1.6	---
TOTAL	4661	1619	2930	2277	1498	3439	1296	464.6	221.7	69.5	76.4	85.4
MEAN	150	54.0	94.5	73.5	53.5	111	43.2	15.0	7.39	2.24	2.46	2.85
MAX	445	136	168	241	180	264	139	35	30	4.0	4.7	15
MIN	25	28	31	31	22	39	18	4.6	2.4	1.7	1.6	1.4
CFSM	3.34	1.20	2.11	1.64	1.19	2.47	.96	.33	.17	.05	.06	.06
IN.	3.86	1.34	2.43	1.89	1.24	2.85	1.07	.38	.18	.06	.06	.07

CAL YR 1976 TOTAL 19205.9 MEAN 52.5 MAX 445 MIN 1.8 CFSM 1.17 IN 15.91
WTR YR 1977 TOTAL 18637.6 MEAN 51.1 MAX 445 MIN 1.4 CFSM 1.14 IN 15.44

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV							
16...	1440	46	68	5.6	8.5	4.0	4.0
DEC							
13...	1120	130	48	6.9	4.0	6.0	12.1
JAN							
25...	1130	30	78	5.3	1.5	1.0	4.2
FEB							
17...	1155	44	54	6.0	-1.0	2.0	--
MAR							
30...	1615	43	69	6.0	23.5	17.0	7.2
MAY							
12...	1415	13	58	6.6	23.0	14.0	--
JUN							
20...	1305	4.6	49	6.3	27.0	20.5	--
AUG							
15...	1355	4.6	122	7.0	31.0	24.0	5.1
SEP							
19...	1330	2.4	181	6.9	25.5	22.0	5.3

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD

LOCATION.--Lat 38°12'50", long 75°40'18", Somerset County, Hydrologic Unit 02060009, on right bank 45 ft (14 m) downstream from farm bridge, 1.4 mi (2.3 km) northeast of Princess Anne, and 1.6 mi (2.6 km) upstream from confluence with Loretto Branch.

DRAINAGE AREA.--4.80 mi² (12.43 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1951 to September 1971, October 1974 to current year.

REVISED RECORDS.--WDR MD-DE-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.03 ft (2.143 m) above mean sea level. Artificial control since April 30, 1975. Nov. 26, 1968, to Sept. 30, 1971, water-stage recorder above and nonrecording gage below gage height 1.4 ft (0.43 m). Prior to Nov. 26, 1968, recording gage at datum 1.0 ft (0.30 m) higher.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--23 years (water years 1952-71, 1975-77), 4.19 ft³/s (0.119 m³/s), 11.85 in/yr (301 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 547 ft³/s (15.5 m³/s) Aug. 20, 1969, gage height, 5.44 ft (1.658 m), from rating curve extended above 27 ft³/s (0.76 m³/s) on basis of channel-conveyance study; no flow at times in 1954, 1963, 1964, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)	Date	Time	Discharge (ft³/s)	(m³/s)	Gage height (ft)	(m)
Oct. 20	2245	71	2.01	3.27	0.997	Jan. 10	1130	63	1.78	3.21	0.978
Oct. 26	0715	*79	2.24	3.35	1.021	Jan. 15	0115	51	1.44	3.08	0.939

Minimum daily discharge, 0.22 ft³/s (0.006 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	11	4.7	5.2	2.9	14	3.3	1.4	.85	.59	.35	.35
2	8.1	7.6	4.2	4.4	2.7	10	3.3	1.4	.82	.57	.44	.32
3	9.7	6.5	3.7	4.2	2.7	8.2	3.2	1.5	.79	.55	.36	.35
4	4.9	5.7	3.3	4.2	2.9	8.0	4.2	1.4	.76	.53	.32	.32
5	3.8	5.1	3.2	4.2	3.3	9.0	17	2.1	.75	.53	.29	.30
6	3.2	4.6	3.0	3.9	2.9	8.1	14	3.1	.96	.55	.28	.29
7	2.7	4.3	15	4.2	2.5	7.3	8.8	3.9	1.4	.64	.27	.32
8	2.5	4.1	20	3.8	2.3	6.5	7.0	3.1	.87	.75	.26	.30
9	2.5	3.8	12	3.6	2.3	5.6	5.3	2.5	1.1	.61	.25	.81
10	2.5	3.7	9.7	37	2.2	5.2	4.6	2.1	1.2	.56	.24	1.1
11	2.4	3.5	10	22	2.3	4.9	4.3	1.8	1.0	.52	.23	.62
12	2.1	3.7	10	12	2.7	4.9	4.0	1.5	.93	.53	.23	.50
13	2.0	3.8	8.9	7.7	5.3	11	3.7	1.4	.82	.56	.22	.45
14	1.9	4.3	6.7	11	6.1	17	3.4	1.3	.77	.49	2.1	.45
15	1.7	4.5	6.2	32	5.3	11	3.0	1.2	.77	.44	7.9	.42
16	1.5	4.9	6.3	16	4.7	8.7	2.8	1.1	.77	.42	1.5	.40
17	1.7	4.5	8.1	9.9	4.1	6.9	2.6	1.1	.76	.42	.73	.55
18	2.1	4.4	6.8	7.4	3.5	6.9	2.4	1.1	.87	.40	.78	.52
19	2.2	4.2	5.7	5.7	3.5	6.9	2.3	1.1	.81	.37	.61	.41
20	16	3.8	6.6	4.8	4.4	7.3	2.1	1.1	.77	.37	.55	.36
21	30	3.6	17	4.4	4.2	7.3	2.1	1.0	.76	.65	.52	.32
22	10	3.2	9.1	4.0	3.7	13	2.0	1.0	.70	.43	.50	.32
23	6.9	2.9	7.5	3.5	3.5	13	1.9	.99	.67	.33	.48	.32
24	5.5	2.8	6.4	3.5	7.3	8.1	2.3	.99	.67	.32	.49	.33
25	6.2	2.8	5.3	3.7	22	6.5	2.6	1.1	.68	.37	.52	.35
26	46	2.7	13	3.7	12	5.2	2.6	1.2	.69	.47	.45	.33
27	18	2.7	12	4.0	14	4.7	2.3	1.0	.64	.36	.40	.32
28	11	3.0	9.1	4.2	25	4.4	1.9	.92	.66	.32	.37	.32
29	8.5	6.4	8.5	4.3	---	4.2	1.7	.87	.80	.31	.37	.30
30	7.1	5.9	7.2	3.6	---	4.2	1.5	.86	.65	.34	.37	.31
31	11	---	6.5	3.2	---	3.7	---	.88	---	.33	.35	---
TOTAL	234.7	134.0	255.7	245.3	160.3	241.7	122.2	46.01	24.69	14.63	22.73	12.36
MEAN	7.57	4.47	8.25	7.91	5.73	7.80	4.07	1.48	.82	.47	.73	.41
MAX	46	11	20	37	25	17	17	3.9	1.4	.75	7.9	1.1
MIN	1.0	2.7	3.0	3.2	2.2	3.7	1.5	.86	.64	.31	.22	.29
CFSM	1.58	.93	1.72	1.65	1.19	1.63	.85	.31	.17	.10	.15	.09
IN.	1.82	1.04	1.98	1.90	1.24	1.87	.95	.36	.19	.11	.18	.10

CAL YR 1976 TOTAL 1603.84 MEAN 4.38 MAX 59 MIN .36 CFSM .91 IN 12.43
WTR YR 1977 TOTAL 1514.32 MEAN 4.15 MAX 46 MIN .22 CFSM .87 IN 11.73

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV 16...	1130	4.8	160	6.2	10.5	6.0	5.4
FEB 09...	1200	2.0	101	6.2	6.0	1.0	5.4
MAR 31...	1015	4.0	182	6.5	22.5	16.0	10.5
MAY 12...	1130	1.7	205	6.9	17.0	26.5	--
JUN 20...	1635	.74	181	6.4	30.5	27.0	--
AUG 15...	1640	4.3	221	7.0	29.5	--	5.1
SEP 19...	1600	.40	175	6.6	30.5	27.0	10.1

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE

LOCATION.--Lat 38°43'42", long 75°33'44", Sussex County, Hydrologic Unit 02060008, on left bank at downstream side of highway bridge, 800 ft (244 m) downstream from Gum Branch, 2.5 mi (4.0 km) southeast of Bridgeville, and 50.5 mi (81.3 km) upstream from mouth.

DRAINAGE AREA.--75.4 mi² (195.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as Gravelly Fork near Bridgeville.

REVISED RECORDS.--WSP 1111: 1947. WSP 1232: 1945-49.

GAGE.--Water-stage recorder. Datum of gage is 13.64 ft (4.157 m) above mean sea level (levels by Soil Conservation Service). Prior to Apr. 19, 1947, nonrecording gage, and Apr. 19, 1947, to Dec. 18, 1969, recording gage at present site and datum. Timber control Sept. 3, 1947, to Dec. 18, 1969. Feb. 18, 1970, to Oct. 1, 1973, recording gage at site 300 ft (91 m) downstream at same datum.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--34 years, 91.0 ft³/s (2.577 m³/s), 16.39 in/yr (416 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,360 ft³/s (66.8 m³/s) Aug. 5, 1967, gage height, 8.86 ft (2.701 m); minimum observed, 6.3 ft³/s (0.18 m³/s) Sept. 29, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 11.0 ft (3.35 m) in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 267 ft³/s (7.56 m³/s) Jan. 10, gage height, 5.82 ft (1.774 m), no peak above base of 360 ft³/s (10 m³/s); minimum daily discharge, 13 ft³/s (0.37 m³/s) Aug. 13, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	99	54	62	59	82	57	62	45	19	17	18
2	41	81	53	59	57	71	59	61	43	18	20	16
3	69	75	52	58	57	65	67	62	40	19	17	15
4	62	72	50	58	58	65	65	63	38	20	17	15
5	39	70	49	58	58	67	83	66	37	19	16	24
6	33	68	48	57	54	64	104	75	37	19	16	36
7	31	66	71	58	53	62	85	75	37	23	16	33
8	30	65	119	55	52	59	78	69	34	26	16	25
9	42	63	87	53	51	57	74	66	40	25	15	32
10	77	63	78	116	52	56	71	64	55	25	16	66
11	48	62	77	181	52	55	70	63	40	27	15	42
12	40	61	76	99	53	54	70	60	35	29	15	32
13	38	60	74	83	56	56	68	59	32	34	13	29
14	37	58	69	83	55	57	68	58	30	29	15	27
15	36	58	69	197	53	54	66	56	29	26	18	26
16	36	58	70	157	51	53	65	55	28	24	16	26
17	38	56	70	101	51	52	64	53	27	23	15	26
18	39	56	66	86	50	54	63	51	29	23	17	24
19	37	56	63	81	50	56	63	55	27	22	16	23
20	59	55	66	77	51	52	62	61	27	21	15	23
21	206	54	77	76	50	52	62	54	26	19	13	24
22	98	54	71	73	48	66	62	51	24	19	14	22
23	64	51	69	69	48	95	62	50	23	18	14	22
24	55	50	65	69	54	73	63	50	21	17	16	21
25	56	50	63	71	147	66	65	53	21	20	27	21
26	80	49	74	69	84	63	69	64	21	21	19	21
27	85	49	75	68	64	61	67	55	19	18	18	20
28	69	50	70	66	110	60	64	50	18	19	17	20
29	65	63	70	66	---	61	65	47	23	18	16	19
30	63	59	66	62	---	60	63	45	20	17	17	19
31	80	---	64	60	---	59	---	45	---	18	17	---
TOTAL	1786	1831	2125	2528	1678	1907	2044	1798	926	675	509	767
MEAN	57.6	61.0	68.5	81.5	59.9	61.5	68.1	58.0	30.9	21.8	16.4	25.6
MAX	206	99	119	197	147	95	104	75	55	34	27	66
MIN	30	49	48	53	48	52	57	45	18	17	13	15
CFSM	.76	.81	.91	1.08	.79	.82	.90	.77	.41	.29	.22	.34
IN.	.88	.90	1.05	1.25	.83	.94	1.01	.89	.46	.33	.25	.38

CAL YR 1976 TOTAL 27616 MEAN 75.5 MAX 549 MIN 16 CFSM 1.00 IN 13.62
WTR YR 1977 TOTAL 18574 MEAN 50.9 MAX 206 MIN 13 CFSM .68 IN 9.16

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-72, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV 03...	1210	74	132	6.1	11.5	10.0	15	--	20
DEC 22...	1100	71	115	5.6	1.0	3.0	10	8.9	20
JAN 21...	1240	76	100	7.2	-2.0	.0	--	--	--
FEB 18...	1105	50	83	6.8	5.0	3.5	--	--	--
MAR 29...	1210	61	112	5.7	25.0	16.5	5	10.2	31
MAY 18...	1125	52	228	6.9	30.5	19.0	--	5.5	--
JUN 15...	1120	30	115	6.3	25.5	20.0	8	--	23
AUG 17...	1040	16	320	6.6	33.0	25.0	--	6.0	--
SEP 14...	1115	28	249	6.2	26.0	19.0	10	5.9	25

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV 03...	6	4.7	2.1	12	2.9	18	13	12	.1
DEC 22...	15	5.0	1.8	7.9	1.9	6	7.4	9.9	.1
JAN 21...	--	--	--	--	--	--	--	--	--
FEB 18...	--	--	--	--	--	--	--	--	--
MAR 29...	15	7.8	2.8	7.6	2.0	19	5.6	8.5	.1
MAY 18...	--	--	--	--	--	--	--	--	--
JUN 15...	7	5.4	2.3	13	2.5	20	4.3	19	.0
AUG 17...	--	--	--	--	--	--	--	--	--
SEP 14...	20	5.9	2.5	11	3.3	6	5.4	36	.0

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
NOV 03...	19	86	75	2.4	.06	410	60	40	40
DEC 22...	19	72	56	2.9	.04	320	40	20	30
JAN 21...	--	--	--	--	--	--	--	--	--
FEB 18...	--	--	--	--	--	--	--	--	--
MAR 29...	17	78	61	2.6	.06	580	50	50	0
MAY 18...	--	--	--	--	--	--	--	--	--
JUN 15...	15	92	72	1.8	.13	1200	720	130	110
AUG 17...	--	--	--	--	--	--	--	--	--
SEP 14...	16	112	83	4.1	.48	130	320	40	40

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE

LOCATION.--Lat 38°50'59", long 75°40'24", Kent County, Hydrologic Unit 02060008, on left bank 45 ft (14 m) upstream from highway bridge, 1.4 mi (2.3 km) upstream from Cattail Branch, 1.6 mi (2.6 km) northeast of Adamsville, 4.9 mi (7.9 km) northwest of Greenwood, and 33 mi (53 km) upstream from mouth.

DRAINAGE AREA.--43.9 mi^2 (113.7 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to March 1969, October 1971 to current year.

REVISED RECORDS.--WSP 1141: 1948(P). WSP 1432: 1946(M), 1948, 1952.

GAGE.--Water-stage recorder. Datum of gage is 26.21 ft (7.989 m) above mean sea level. Prior to Nov. 24, 1953, nonrecording gage and crest-stage gage, and Nov. 24, 1953, to March 1969, recording gage at site on old channel about 240 ft (73 m) southeast of present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--31 years (water years 1944-68, 1972-77), 53.5 ft^3/s (1.515 m^3/s), 16.55 in/yr (420 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft^3/s (105 m^3/s) July 13, 1975, gage height, 13.19 ft (4.020 m); maximum gage height, 13.98 ft (4.261 m) Aug. 5, 1967, present datum; minimum discharge, 1.0 ft^3/s (0.028 m^3/s) Sept. 9, 10, 1964, Aug. 20, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.5 ft (5.03 m), present datum, in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 332 ft^3/s (9.40 m^3/s) Sept. 7, gage height, 4.37 ft (1.332 m), no peak above base of 450 ft^3/s (12 m^3/s); minimum, 5.1 ft^3/s (0.14 m^3/s) Sept. 5, gage height, 2.07 ft (0.631 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	53	33	41	33	56	37	25	16	9.9	8.7	5.9
2	23	43	33	37	30	50	39	25	16	9.9	8.7	6.7
3	24	40	32	32	29	47	46	25	16	9.9	8.7	6.3
4	22	39	32	32	30	47	43	25	15	11	8.3	5.7
5	18	38	31	31	30	47	98	27	14	13	8.1	6.4
6	17	36	31	30	27	45	91	26	15	13	7.7	17
7	16	35	74	32	30	43	64	25	15	12	7.6	165
8	16	34	80	34	27	41	57	24	14	12	7.3	38
9	28	34	55	32	26	39	51	23	21	11	7.4	25
10	36	34	49	100	26	38	48	22	38	11	7.5	114
11	24	33	49	107	26	37	46	22	24	9.9	6.7	46
12	20	32	48	58	26	37	43	21	18	9.9	6.6	26
13	19	32	47	49	30	38	41	20	16	9.9	6.8	19
14	18	32	43	45	30	40	39	20	14	9.9	7.0	16
15	18	32	43	124	28	37	38	19	14	9.9	7.2	14
16	17	31	43	83	26	37	36	19	14	9.9	6.8	13
17	18	30	42	54	26	35	35	18	13	9.9	7.2	14
18	18	31	40	47	25	37	34	18	13	9.9	7.1	12
19	18	31	37	44	25	39	33	20	13	9.9	6.7	12
20	49	30	39	43	26	37	32	22	12	9.9	6.7	11
21	165	30	45	41	25	36	31	20	12	9.9	6.5	10
22	47	29	40	39	23	98	31	18	11	9.9	6.2	10
23	35	29	38	37	24	83	30	17	11	8.7	6.1	9.9
24	32	29	36	36	32	56	31	17	11	8.7	6.8	9.9
25	32	28	35	37	136	50	31	19	11	8.7	7.3	9.9
26	69	28	41	35	57	46	30	20	11	9.4	6.9	9.9
27	55	29	42	35	53	44	29	19	9.9	8.7	7.6	9.7
28	42	29	39	34	70	43	28	17	11	8.7	7.2	9.3
29	38	33	39	36	---	42	28	16	13	8.7	6.0	9.1
30	36	33	36	34	---	41	26	16	11	9.4	5.7	8.7
31	51	---	36	32	---	40	---	16	---	9.4	5.7	---
TOTAL	1039	997	1308	1451	976	1406	1246	641	442.9	311.9	220.8	669.4
MEAN	33.5	33.2	42.2	46.8	34.9	45.4	41.5	20.7	14.8	10.1	7.12	22.3
MAX	165	53	80	124	136	98	98	27	38	13	8.7	165
MIN	16	28	31	30	23	35	26	16	9.9	8.7	5.7	5.7
CFSM	.76	.76	.96	1.07	.80	1.03	.95	.47	.34	.23	.16	.51
IN.	.88	.84	1.11	1.23	.83	1.19	1.06	.54	.38	.26	.19	.57

CAL YR 1976 TOTAL 16224.2 MEAN 44.3 MAX 767 MIN 8.1 CFSM 1.01 IN 13.75
WTR YR 1977 TOTAL 10709.0 MEAN 29.3 MAX 165 MIN 5.7 CFSM .67 IN 9.07

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
NOV										
02...	1115	44	122	6.1	8.0	7.0	20	--	12.2	23
DEC										
08...	1355	75	120	7.1	-4.0	5.0	--	--	12.0	--
27...	1420	42	101	7.2	3.0	4.0	15	--	10.4	22
JAN										
18...	1510	47	109	6.5	-8.0	.5	--	--	--	--
FEB										
15...	1215	29	91	7.2	5.5	8.0	--	--	--	--
MAR										
22...	1050	41	91	7.1	12.5	9.0	10	5	10.7	36
MAY										
19...	1425	18	186	7.4	29.5	26.0	--	--	10.4	--
JUN										
16...	1125	14	117	7.2	27.0	21.5	35	--	11.8	26
AUG										
02...	1410	8.6	100	6.6	31.5	29.5	--	--	11.6	--
SEP										
06...	1115	17	86	7.0	30.0	24.0	15	--	7.8	22

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV									
02...	11	5.8	2.1	7.5	3.2	15	14	8.6	.1
DEC									
08...	--	--	--	--	--	--	--	--	--
27...	13	6.0	1.6	7.2	1.5	11	12	8.7	.1
JAN									
18...	--	--	--	--	--	--	--	--	--
FEB									
15...	--	--	--	--	--	--	--	--	--
MAR									
22...	20	6.0	5.0	7.3	1.4	20	9.2	8.5	--
MAY									
19...	--	--	--	--	--	--	--	--	--
JUN									
16...	10	7.0	2.0	6.9	.9	19	9.3	8.7	.1
AUG									
02...	--	--	--	--	--	--	--	--	--
SEP									
06...	6	5.9	1.8	8.3	4.4	20	11	8.1	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
NOV									
02...	21	77	70	.92	.17	840	20	70	70
DEC									
08...	--	--	--	--	--	--	--	--	--
27...	21	75	64	.92	.02	860	110	70	90
JAN									
18...	--	--	--	--	--	--	--	--	--
FEB									
15...	--	--	--	--	--	--	--	--	--
MAR									
22...	1.3	85	49	.84	.01	110	130	110	110
MAY									
19...	--	--	--	--	--	--	--	--	--
JUN									
16...	22	82	60	.66	.03	1600	1500	70	70
AUG									
02...	--	--	--	--	--	--	--	--	--
SEP									
06...	14	66	64	.19	.07	2600	50	90	80

01489000 FAULKNER BRANCH AT FEDERALSBURG, MD

LOCATION.--Lat 38°42'44", long 75°47'34", Caroline County, Hydrologic Unit 02060008, on right bank 25 ft (8 m) downstream from bridge on Nichols Road, 0.9 mi (1.4 km) upstream from mouth, and 1.6 mi (2.6 km) northwest of Federalsburg.

DRAINAGE AREA.--7.10 mi² (18.39 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 1552: 1952. WSP 2103: 1960(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 16.70 ft (5.090 m) above mean sea level.

REMARKS.--Water-discharge records good. Diversion for irrigation of about 100 acres (40.5 ha) above station during some years.

AVERAGE DISCHARGE.--27 years, 8.61 ft³/s (0.244 m³/s), 16.47 in/yr (418 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,680 ft³/s (47.6 m³/s) July 13, 1975, gage height, 5.98 ft (1.823 m), from rating curve extended above 210 ft³/s (5.95 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times during many years (result of pumpage for irrigation).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of July 13, 1975, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft³/s (2.15 m³/s) Jan. 15, gage height, 2.33 ft (0.710 m), no other peak above base of 60 ft³/s (1.6 m³/s); minimum, 0.10 ft³/s (0.003 m³/s) Aug. 21, , 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	5.5	3.6	4.8	4.2	9.7	4.8	2.9	2.4	1.2	1.6	.83
2	2.7	4.7	3.5	4.6	3.9	8.4	7.0	3.0	2.2	1.1	1.6	.73
3	3.5	4.5	3.3	4.7	4.1	7.7	7.2	3.1	1.9	1.1	1.2	.72
4	2.2	4.4	3.1	4.9	4.4	8.0	6.6	2.9	1.7	1.1	1.1	.73
5	1.8	4.3	3.1	4.7	4.6	8.5	17	4.4	1.7	1.1	1.1	.80
6	1.7	4.0	3.0	4.6	3.7	7.6	13	5.9	2.1	1.1	1.1	1.0
7	1.6	4.0	12	4.9	3.7	7.3	9.1	5.5	2.1	1.5	1.0	8.2
8	1.5	3.7	10	4.5	3.7	6.7	8.1	3.8	1.9	1.5	.92	1.7
9	4.2	3.5	6.4	4.3	3.7	6.4	7.1	3.4	3.0	1.3	.98	3.1
10	2.6	3.7	5.8	19	3.8	6.3	6.7	3.3	3.9	1.1	1.1	7.2
11	2.0	3.5	5.8	14	4.0	6.2	6.3	3.3	2.2	.95	.90	2.3
12	1.8	3.5	5.9	7.7	4.2	6.1	6.0	3.0	2.1	1.6	.85	1.6
13	1.8	3.5	5.4	6.4	4.9	6.6	5.8	3.0	1.7	2.6	.88	1.3
14	1.7	3.5	4.9	11	4.6	6.2	5.5	2.9	1.7	1.3	1.2	1.1
15	1.5	3.5	5.2	43	4.4	5.6	5.1	2.9	1.7	1.1	1.4	1.1
16	1.5	3.3	5.2	14	4.0	5.5	4.9	2.9	2.2	.95	1.1	1.0
17	2.1	3.2	5.3	6.2	3.9	5.1	4.6	2.6	1.9	.86	1.1	1.3
18	2.2	3.2	4.8	5.8	3.8	5.8	4.4	2.4	2.2	.91	1.0	1.2
19	1.9	3.2	4.7	5.4	3.9	5.5	4.3	2.4	1.6	.91	.88	.98
20	5.6	3.1	5.5	5.2	4.2	5.2	4.1	2.4	1.5	1.1	.85	.93
21	7.3	3.0	7.8	5.0	3.9	4.9	3.9	2.6	1.7	1.4	.79	.97
22	3.7	3.0	5.6	4.8	3.7	12	3.8	2.6	1.3	1.6	.70	.99
23	3.2	2.8	5.6	4.5	3.8	10	3.7	2.6	1.2	1.1	.70	1.0
24	3.1	2.8	5.1	4.5	9.5	7.4	3.9	2.6	1.1	1.1	1.9	.99
25	3.6	2.8	5.0	4.8	21	6.5	4.0	3.7	1.1	1.4	3.3	.97
26	7.3	2.8	8.0	4.6	9.0	6.0	3.8	3.9	1.1	1.6	1.2	.98
27	4.9	2.8	6.5	4.5	11	5.7	3.4	2.9	1.1	1.3	.97	.89
28	4.3	3.1	6.1	4.4	15	5.7	3.3	2.6	1.5	1.2	.86	.88
29	4.0	5.8	6.0	4.8	---	5.7	3.3	2.4	3.3	1.2	.83	.84
30	4.0	4.2	5.3	4.7	---	5.6	3.0	2.4	1.5	1.5	.71	.84
31	7.7	---	5.4	4.4	---	5.3	---	2.4	---	1.5	.72	---
TOTAL	99.2	108.9	172.9	230.7	158.6	209.0	173.7	96.7	56.6	39.28	34.54	47.17
MEAN	3.20	3.63	5.58	7.44	5.66	6.74	5.79	3.12	1.89	1.27	1.11	1.57
MAX	7.7	5.8	12	43	21	12	17	5.9	3.9	2.6	3.3	8.2
MIN	1.5	2.8	3.0	4.3	3.7	4.9	3.0	2.4	1.1	.86	.70	.72
CFSM	.45	.51	.79	1.05	.80	.95	.82	.44	.27	.18	.16	.22
IN.	.52	.57	.91	1.21	.83	1.09	.91	.51	.30	.21	.18	.25

CAL YR 1976 TOTAL 2421.80 MEAN 6.62 MAX 121 MIN .71 CFSM .93 IN 12.69
WTR YR 1977 TOTAL 1427.29 MEAN 3.91 MAX 43 MIN .70 CFSM .55 IN 7.48

01489000 FAULKNER BRANCH AT FEDERALSBURG, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV 08...	1155	3.8	177	6.4	8.0	8.0	5.0
JAN 21...	1440	5.0	120	6.7	-2.0	1.0	--
FEB 16...	1530	4.2	141	7.3	1.5	--	--
APR 08...	1250	8.1	192	7.1	11.0	10.0	10.6
MAY 10...	1050	3.3	176	7.2	14.5	11.0	--
JUN 27...	1550	1.0	191	6.9	32.0	19.0	5.7
AUG 04...	1030	1.1	232	6.5	28.0	20.0	9.0
SEP 14...	1350	1.2	184	6.9	24.5	19.0	7.0

01490000 CHICAMACOMICO RIVER NEAR SALEM, MD

LOCATION.--Lat 38°30'43", long 75°52'51", Dorchester County, Hydrologic Unit 02060007, on left bank 30 ft (9 m) downstream from Big Mill Pond dam, 1.6 mi (2.6 km) east of Salem, 3.5 mi (5.6 km) northwest of Vienna, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--15.0 mi² (38.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1951 to current year.

REVISED RECORDS.--WSP 1332: 1952.

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (3.05 m), from topographic map.

REMARKS.--Water-discharge records fair. Occasional regulation by Big Mill Pond. Diversion for irrigation of about 225 acres (91.1 ha) above station.

AVERAGE DISCHARGE.--26 years, 17.9 ft³/s (0.507 m³/s), 16.21 in/yr (412 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 542 ft³/s (15.3 m³/s) Aug. 3, 1973, gage height, 4.48 ft (1.366 m); minimum daily, 0.13 ft³/s (0.004 m³/s) July 6, 7, 1977 (result of pumpage for irrigation).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163 ft³/s (4.62 m³/s) Sept. 10, gage height, 3.22 ft (0.981 m); minimum daily, 0.13 ft³/s (0.004 m³/s) July 6, 7 (result of pumpage for irrigation).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	13	8.7	9.2	8.8	16	9.0	7.2	5.2	1.7	3.0	.92
2	8.8	8.5	8.3	8.8	8.7	13	12	7.6	5.6	1.1	3.1	1.6
3	14	7.8	7.5	8.8	8.8	12	17	9.5	4.6	.22	2.3	1.0
4	12	8.0	7.0	9.3	9.5	13	14	7.6	3.3	.19	2.3	.38
5	11	7.8	7.2	9.7	10	15	26	7.8	2.3	.34	2.5	.92
6	11	7.5	7.0	9.3	9.3	13	30	7.8	2.5	.13	2.7	1.9
7	12	8.0	17	10	8.3	13	19	10	3.6	.13	2.5	9.1
8	11	7.5	20	9.5	8.0	12	16	8.5	2.4	.34	2.5	8.1
9	16	7.0	12	8.3	8.0	11	14	7.6	7.0	.44	2.7	17
10	17	7.8	11	23	8.7	11	13	6.8	16	.19	2.8	113
11	9.3	8.0	11	25	9.2	11	13	6.7	9.8	.34	2.4	39
12	5.6	8.8	11	14	9.7	11	12	6.5	7.2	3.7	1.7	16
13	5.9	9.5	11	11	11	11	11	6.2	6.4	9.0	1.6	11
14	6.5	8.7	9.3	13	10	12	11	5.7	5.6	7.6	2.5	10
15	4.9	8.5	9.7	36	9.3	10	10	5.6	5.6	7.2	2.5	7.8
16	4.6	8.3	10	25	8.8	10	9.8	4.8	5.6	8.5	1.8	6.0
17	5.2	8.0	11	16	8.5	9.5	9.5	4.6	6.2	7.2	3.0	7.8
18	6.5	8.5	9.8	13	8.1	11	9.3	4.8	10	6.5	3.3	8.1
19	6.2	8.3	9.3	13	8.5	11	9.5	4.8	8.8	5.7	1.9	7.2
20	11	8.1	11	13	9.0	11	8.8	4.6	6.7	4.8	1.7	6.5
21	24	8.1	16	12	8.7	11	8.7	4.2	6.8	4.3	1.8	7.0
22	9.5	8.3	11	12	8.0	17	8.7	4.0	6.0	4.5	3.7	7.2
23	4.8	7.6	11	12	8.5	20	8.3	3.9	5.4	4.5	4.0	8.5
24	4.3	7.3	10	12	12	14	9.0	4.0	5.1	4.5	3.9	10
25	6.4	7.3	9.5	12	27	12	11	4.8	5.1	6.0	7.0	11
26	17	7.2	15	11	17	11	11	7.2	4.2	6.0	4.2	13
27	10	7.5	13	11	15	10	9.5	5.7	3.0	4.6	2.8	16
28	6.7	8.0	11	11	23	11	8.7	4.9	1.9	12	2.0	15
29	6.2	17	11	11	---	12	8.1	4.5	3.4	6.5	1.6	10
30	6.2	12	11	9.5	---	11	7.5	4.2	2.0	3.9	1.2	7.3
31	15	---	10	8.8	---	10	---	4.6	---	2.7	1.0	---
TOTAL	296.4	257.9	337.3	407.2	299.4	375.5	364.4	186.7	167.3	124.82	82.0	378.32
MEAN	9.56	8.60	10.9	13.1	10.7	12.1	12.1	6.02	5.58	4.03	2.65	12.6
MAX	24	17	20	36	27	20	30	10	16	12	7.0	113
MIN	4.3	7.0	7.0	8.3	8.0	9.5	7.5	3.9	1.9	.13	1.0	.38
CFSM	.64	.57	.73	.87	.71	.81	.81	.40	.37	.27	.18	.84
IN.	.74	.64	.84	1.01	.74	.93	.90	.46	.41	.31	.20	.94

CAL YR 1976 TOTAL 4985.24 MEAN 13.6 MAX 132 MIN .22 CFSM .91 IN 12.36
WTR YR 1977 TOTAL 3277.24 MEAN 8.98 MAX 113 MIN .13 CFSM .60 IN 8.13

01490000 CHICAMACOMICO RIVER NEAR SALEM, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV							
09...	1150	6.7	105	6.7	9.0	4.5	5.8
FEB							
16...	1220	8.4	57	7.2	-1.0	4.5	--
APR							
07...	1415	18	108	6.8	11.5	10.5	9.9
MAY							
10...	1455	6.9	107	7.4	16.0	13.5	--
JUN							
27...	1400	3.0	122	6.8	30.5	30.0	6.4
AUG							
04...	1315	2.2	141	6.5	32.5	29.5	7.4
SEP							
15...	1300	7.1	218	6.9	21.0	20.0	6.9

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD

LOCATION.--Lat 38°59'50", long 75°47'09", Caroline County, Hydrologic Unit 02060005, on left bank at highway bridge, 0.1 mi (0.2 km) upstream from Gravelly Branch, 2 mi (3 km) northeast of Greensboro, and 60 mi (97 km) upstream from mouth.

DRAINAGE AREA.--113 mi² (293 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1948 to current year.

REVISED RECORDS.--WSP 1622: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.51 ft (1.070 m) above mean sea level.

REMARKS.--Water-discharge records good. Slight diurnal fluctuation at low flow caused by mill above station.

AVERAGE DISCHARGE.--29 years, 128 ft³/s (3.625 m³/s), 15.38 in/yr (391 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,970 ft³/s (197 m³/s) Aug. 4, 1967, gage height, 14.47 ft (4.410 m), from rating curve extended above 3,600 ft³/s (102 m³/s); minimum, 1.2 ft³/s (0.034 m³/s) Aug. 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of Aug. 4, 1967, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 386 ft³/s (10.9 m³/s) Mar. 23, gage height, 3.99 ft (1.216 m), no peak above base of 1,000 ft³/s (28 m³/s); minimum, 1.3 ft³/s (0.037 m³/s) July 30, gage height, 1.59 ft (0.485 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	104	59	76	45	155	84	42	19	12	7.6	35
2	60	120	53	71	43	132	83	39	23	17	6.6	16
3	60	91	49	65	43	110	114	37	22	15	6.5	8.8
4	46	76	47	63	42	97	140	34	20	13	6.4	11
5	35	70	44	63	41	96	141	37	18	12	4.3	9.1
6	30	64	43	61	39	96	200	46	18	11	4.3	8.4
7	26	60	73	63	38	88	220	48	22	14	3.7	22
8	25	57	183	60	39	82	166	45	20	20	4.0	60
9	30	54	245	61	40	75	136	40	24	19	4.7	49
10	42	52	149	98	46	71	113	37	55	17	6.9	55
11	38	51	115	157	52	68	98	36	52	14	23	54
12	33	49	108	292	57	66	90	35	31	12	18	30
13	29	49	105	190	67	66	83	31	23	13	13	22
14	27	48	98	95	76	76	76	29	20	10	13	18
15	25	47	85	125	74	83	71	25	20	9.0	14	17
16	25	49	81	246	68	76	66	27	19	6.6	11	17
17	26	46	80	220	59	69	62	25	18	6.0	11	17
18	31	46	78	130	50	68	58	23	19	7.3	9.4	16
19	28	45	73	92	53	84	56	27	19	6.1	8.7	16
20	36	45	70	77	55	94	54	31	16	5.3	8.6	15
21	96	44	81	73	55	84	50	28	16	5.7	6.2	14
22	173	44	89	66	53	106	48	22	15	5.5	6.5	14
23	114	42	81	60	54	256	46	20	12	4.0	4.4	13
24	68	40	74	57	62	329	46	20	10	2.4	9.1	14
25	60	39	70	60	141	201	50	22	11	2.9	43	14
26	81	39	84	63	268	151	53	29	14	6.3	35	15
27	132	39	112	61	191	126	56	24	12	5.9	25	15
28	134	41	115	60	159	109	51	21	8.8	4.8	18	14
29	87	55	101	57	---	103	48	20	17	3.1	14	13
30	71	63	93	51	---	99	46	20	16	4.9	11	12
31	79	---	87	47	---	92	---	19	---	9.3	24	---
TOTAL	1800	1669	2825	2960	2010	3408	2605	939	609.8	294.1	380.9	634.3
MEAN	58.1	55.6	91.1	95.5	71.8	110	86.8	30.3	20.3	9.49	12.3	21.1
MAX	173	120	245	292	268	329	220	48	55	20	43	60
MIN	25	39	43	47	38	66	46	19	8.8	2.4	3.7	8.4
CFSM	.51	.49	.81	.85	.64	.97	.77	.27	.18	.08	.11	.19
IN.	.59	.55	.93	.97	.66	1.12	.86	.31	.20	.10	.13	.21

CAL YR 1976 TOTAL 38765.0 MEAN 106 MAX 1700 MIN 5.0 CFSM .94 IN 12.76
WTR YR 1977 TOTAL 20135.1 MEAN 55.2 MAX 329 MIN 2.4 CFSM .49 IN 6.63

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to current year.
WATER TEMPERATURES: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 184 micromhos Sept. 23, 1976; minimum daily, 45 micromhos July 15, 1975.
WATER TEMPERATURE: Maximum daily, 27.5°C Aug. 3, 1975; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 171 micromhos Aug. 24; minimum daily, 77 micromhos Nov. 30.
WATER TEMPERATURE: Maximum daily, 26.5°C July 21; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)
OCT												
22...	1330	180	--	6.5	12.0	10.0	1	17	8.5	8110	8130	40
NOV												
18...	1010	45	--	7.0	7.0	4.5	1	3	--	100	110	46
DEC												
21...	1020	76	120	8.5	-3.0	4.5	3	6	11.2	79	440	41
JAN												
14...	1550	95	140	7.7	-4.0	.5	70	5	--	120	80	32
24...	1230	55	155	6.4	3.0	1.0	--	--	4.7	--	--	--
FEB												
23...	1410	53	153	7.2	19.0	5.0	1	4	13.6	26	14	32
MAR												
23...	1020	200	100	6.5	8.5	6.5	1	30	15.0	5750	E10000	33
APR												
25...	1005	49	118	7.0	14.0	18.0	3	--	6.8	3900	3100	--
26...	1000	48	118	7.2	16.5	15.5	3	7	7.8	--	--	37
MAY												
23...	1220	21	130	6.9	24.5	20.0	1	8	6.8	45	110	43
JUN												
23...	1230	12	150	7.6	25.0	20.0	--	4	8.2	47	40	45
JUL												
22...	1115	5.0	167	6.9	29.5	26.5	--	--	4.9	--	--	--
25...	1050	2.4	155	7.2	25.0	22.5	3	1	6.4	53	B4600	55
AUG												
23...	1430	3.5	165	6.8	27.5	22.0	1	3	7.8	83	270	48
SEP												
22...	1025	14	160	6.9	20.0	19.5	10	2	8.0	63	330	49

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT												
22...	25	11	3.0	5.2	4.4	18	15	30	11	.1	13	90
NOV												
18...	28	13	3.2	7.3	2.4	22	18	23	13	.1	19	86
DEC												
21...	27	11	3.3	6.4	1.8	17	14	22	11	.1	19	88
JAN												
14...	21	8.5	2.6	6.9	2.0	13	11	22	9.7	.1	18	92
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	16	9.7	1.9	7.2	1.9	20	16	19	10	.1	18	92
MAR												
23...	21	9.0	2.6	6.2	2.8	15	12	19	9.1	.1	14	80
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	16	10	3.0	7.3	2.2	26	21	17	11	.1	17	95
MAY												
23...	23	13	2.5	7.9	2.1	24	20	17	12	.1	18	97
JUN												
23...	18	13	3.0	8.4	1.9	33	27	16	14	.1	18	122
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--
25...	19	16	3.7	11	2.3	44	36	14	17	.1	15	99
AUG												
23...	18	14	3.2	10	2.4	37	30	15	18	.1	14	108
SEP												
22...	19	14	3.4	9.6	3.1	36	30	16	15	.1	16	107

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)
OCT												
22...	87	.41	--	.60	.12	--	--	--	--	--	--	--
NOV												
18...	92	1.1	--	.34	.03	--	--	--	--	--	--	--
DEC												
21...	63	1.1	--	.27	.04	--	--	--	--	--	--	--
JAN												
14...	76	.97	--	.36	.04	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	78	1.1	--	.30	.05	--	--	--	--	--	--	--
MAR												
23...	71	.68	--	1.1	.12	1	0	--	--	2	0	10
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	80	.79	--	.72	.09	--	--	--	--	--	--	--
MAY												
23...	84	.92	--	.51	.09	--	--	--	--	--	--	--
JUN												
23...	91	.81	--	.26	.07	2	2	--	--	0	0	10
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--
25...	101	.54	--	.44	.05	--	--	--	--	--	--	--
AUG												
23...	95	.56	--	.15	.03	--	--	--	--	--	--	--
SEP												
22...	95	.70	.03	--	.04	0	0	0	0	0	0	<10

DATE	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)
OCT												
22...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
21...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
14...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
23...	7	2	0	8	5	2900	400	8	0	100	70	.0
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	2	0	0	3	3	1400	640	5	5	60	50	.0
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
23...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
22...	0	0	0	0	0	520	360	7	7	40	30	<.5

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	SUS-PENDED ORGANIC CARBON (C) (MG/L)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)
OCT												
22...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
18...	--	--	--	--	--	--	--	--	--	--	ND	ND
DEC												
21...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
14...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
23...	.0	0	0	--	--	30	20	--	--	--	--	--
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	.0	0	0	--	--	0	0	7.8	--	--	ND	--
JUL												
22...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
23...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
22...	<.5	--	0	0	0	10	10	--	5.7	.9	ND	--

DATE	TOTAL ATRA-ZINE (UG/L)	ATRA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	TOTAL CHLOR-DANE (UG/L)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDD (UG/L)	P,P' DDD IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDE (UG/L)	P,P' DDE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDT (UG/L)	O,P' DDT IN BOTTOM MA-TERIAL (UG/KG)	P,P' DDT IN BOTTOM MA-TERIAL (UG/KG)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
NOV											
18...	ND	ND	ND	ND	ND	1.0	ND	.4	ND	.4	3.6
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
14...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
23...	ND	--	ND	--	ND	--	ND	--	ND	--	--
JUL											
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	--	--	ND	--	ND	--	ND	--	ND	--	--

ND NOT DETECTED

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
NOV											
18...	ND	ND	ND	.2	ND	ND	ND	ND	ND	ND	ND
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
14...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
23...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
JUL											
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
NOV											
18...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
14...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
23...	--	--	--	--	--	--	--	--	--	--	--
APR											
26...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
23...	--	ND	--	ND	--	ND	--	ND	--	ND	--
JUL											
25...	--	--	--	--	--	--	--	--	--	--	--
AUG											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	--	ND	--	ND	--	ND	--	ND	--	ND	--

ND NOT DETECTED

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL PARA-THION (UG/L)	PARA-THION IN BOTTOM MA-TERIAL (UG/KG)	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)	SIMA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	TOTAL TOX-APHENE (UG/L)	TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	TRI-THION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MA-TERIAL (UG/KG)
OCT										
22...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DEC										
21...	--	--	--	--	--	--	--	--	--	--
JAN										
14...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
23...	--	--	--	--	--	--	--	--	--	--
APR										
26...	--	--	--	--	--	--	--	--	--	--
MAY										
23...	--	--	--	--	--	--	--	--	--	--
JUN										
23...	ND	--	ND	--	ND	--	ND	--	ND	--
JUL										
25...	--	--	--	--	--	--	--	--	--	--
AUG										
23...	--	--	--	--	--	--	--	--	--	--
SEP										
22...	ND	--	--	--	ND	--	ND	--	ND	--

DATE	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MA-TERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MA-TERIAL (UG/KG)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT										
22...	--	--	--	--	1000	--	--	46	22	58
NOV										
18...	ND	ND	ND	ND	780	--	--	2	.24	100
DEC										
21...	--	--	--	--	53	.615	.645	5	1.0	100
JAN										
14...	--	--	--	--	--	--	--	2	.51	100
24...	--	--	--	--	--	--	--	6	.89	71
FEB										
23...	--	--	--	--	330	--	--	8	1.1	74
MAR										
23...	--	--	--	--	--	--	--	32	17	90
APR										
26...	--	--	--	--	--	--	--	11	1.4	100
MAY										
23...	--	--	--	--	58	--	--	21	1.2	62
JUN										
23...	ND	--	ND	--	450	2.20	3.70	1	.03	100
JUL										
25...	--	--	--	--	21	--	--	4	.03	100
AUG										
23...	--	--	--	--	220	--	--	2	.02	100
SEP										
22...	ND	--	ND	--	0	.945	2.60	6	.23	100

ND NOT DETECTED

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	142	133	110	108	124	121	---	148	130	158	124
2	135	138	140	145	108	123	115	140	146	---	152	130
3	139	136	130	140	105	131	121	145	147	---	150	137
4	143	137	130	170	110	132	123	142	150	---	155	145
5	140	137	132	150	---	135	123	142	154	131	155	153
6	143	138	122	133	110	130	---	138	145	133	157	159
7	---	---	---	140	110	130	117	137	---	137	155	152
8	143	112	140	135	108	122	117	142	---	---	154	129
9	144	101	142	150	109	118	---	146	141	---	150	121
10	142	112	139	140	109	92	---	145	138	---	142	---
11	141	116	135	125	---	---	125	142	137	131	148	150
12	142	129	130	---	109	89	---	142	122	132	134	138
13	141	130	125	---	109	108	132	146	---	130	150	143
14	142	122	95	140	109	80	---	146	138	132	147	144
15	143	124	101	---	106	92	---	---	141	132	147	144
16	146	124	110	---	---	105	134	146	143	138	150	138
17	142	123	112	---	107	110	135	146	146	140	152	153
18	142	123	115	---	109	113	135	146	---	139	154	158
19	147	122	121	---	104	110	---	147	146	140	149	158
20	140	---	---	---	---	95	---	147	---	141	155	160
21	143	---	120	---	99	105	136	146	147	144	150	156
22	126	---	110	135	108	117	140	149	147	142	150	149
23	130	---	110	142	153	124	123	144	150	150	166	143
24	142	137	130	110	---	126	110	141	144	148	171	142
25	148	---	---	115	140	127	124	---	138	158	170	142
26	146	---	---	120	140	131	126	143	134	150	169	143
27	132	---	---	---	124	132	---	141	135	148	140	145
28	132	130	---	---	125	---	---	---	135	147	126	147
29	139	132	---	---	---	---	---	141	128	148	129	148
30	144	77	---	---	---	---	---	---	131	146	133	148
31	142	---	---	---	---	---	---	---	---	150	130	---
MEAN	141	125	124	135	114	115	125	144	141	141	150	145

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	10.5	0.0	0.0	---	6.5	15.0	---	---	---	23.0	24.5
2	16.5	7.5	0.5	0.0	---	6.5	13.0	17.0	---	---	23.0	25.5
3	16.0	9.0	0.0	0.0	---	7.0	16.0	18.0	---	---	23.5	25.0
4	---	9.5	0.0	0.0	---	9.0	13.0	17.0	---	---	24.0	24.5
5	18.0	9.5	1.0	0.0	---	---	12.5	17.0	---	---	24.5	24.0
6	18.5	8.5	1.5	0.0	---	---	---	19.0	---	---	25.0	24.5
7	---	---	---	0.0	---	9.5	10.5	20.0	---	---	25.5	23.5
8	19.0	7.5	3.0	0.0	---	7.5	12.0	17.5	---	---	21.5	22.5
9	20.0	5.5	0.0	0.0	---	10.5	---	14.5	---	---	26.0	20.0
10	18.0	6.5	2.0	0.0	---	10.0	---	12.0	---	---	25.0	---
11	14.5	6.0	4.0	0.0	---	13.5	13.0	12.0	---	---	24.5	17.5
12	13.0	5.0	4.0	0.0	---	---	---	14.5	---	---	25.0	17.0
13	13.0	5.0	4.5	---	---	13.5	18.0	18.0	---	25.0	25.0	18.0
14	13.5	5.0	1.0	0.5	---	13.5	---	18.0	---	24.5	25.0	20.5
15	11.5	5.0	3.0	---	---	11.5	---	---	---	24.0	24.0	17.5
16	13.5	5.0	3.0	---	---	14.0	17.5	16.5	---	24.0	24.5	18.5
17	---	5.0	4.0	---	---	---	17.0	19.5	---	25.5	26.0	21.0
18	11.0	6.0	3.0	---	---	11.5	15.0	21.0	---	26.0	23.0	22.0
19	9.5	6.0	3.0	---	---	9.5	---	20.5	---	26.0	20.5	21.5
20	---	6.0	---	---	---	9.0	---	19.5	---	25.5	20.5	23.0
21	---	6.0	4.5	---	---	---	19.0	22.0	26.0	26.5	20.0	21.0
22	11.0	5.0	0.0	---	---	9.5	19.0	---	---	24.5	22.0	19.5
23	9.0	4.0	0.0	---	6.5	7.0	22.0	20.0	20.0	22.5	21.5	18.5
24	---	3.0	0.0	1.0	6.5	7.0	20.0	---	---	21.5	22.0	20.0
25	11.5	---	---	---	6.0	---	18.0	---	---	23.0	22.0	19.5
26	12.0	---	---	---	7.5	---	17.0	---	---	21.5	20.5	21.0
27	9.0	---	---	---	11.0	9.0	15.0	---	---	20.0	21.0	20.5
28	7.5	8.0	---	---	7.0	10.5	17.0	---	---	19.5	23.0	14.5
29	7.5	8.5	---	---	---	16.0	15.0	---	---	21.0	24.0	14.0
30	8.0	4.0	---	---	---	8.0	13.0	---	---	21.5	24.5	17.0
31	10.0	---	---	---	---	18.0	---	---	---	22.0	23.0	---

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 22,76 1330	NOV 18,76 1010	DEC 21,76 1020	FEB 23,77 1410	MAY 23,77 1220
TOTAL CELLS/ML	1000	780	53	330	58
DIVERSITY: DIVISION	0.7	0.2	1.7	1.0	0.4
.CLASS	0.7	0.2	1.8	1.1	0.4
..ORDER	0.7	0.2	1.9	1.1	0.8
...FAMILY	1.1	0.3	2.2	2.2	2.8
....GENUS	1.2	0.3	2.2	2.2	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	--	-	5	8
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	2	4	--	-	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	8#	15	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	6	1	2	4	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	*	0	--	-	--	-	5	8
....MELOSIRA	--	-	--	-	--	-	--	-	*	0
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	--	-	*	0
....COCCONEIS	13	1	--	-	--	-	--	-	*	0
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-	*	0
....RHOPALODIA	13	1	--	-	--	-	--	-	--	-
...EUNOTIACEAE										
....EUNOTIA	--	-	--	-	--	-	--	-	5	8
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	3	1	*	0
....FRAGILARIA	13	1	--	-	--	-	--	-	5	8
....SYNEDRA	13	1	--	-	--	-	--	-	2	4
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	*	0	--	-	21	6	10#	17
...MERIDIONACEAE										
....MERIDION	--	-	--	-	--	-	10	3	--	-
...NAVICULACEAE										
....FRUSTULIA	--	-	--	-	--	-	--	-	2	4
....GYROSIGMA	26	3	--	-	--	-	3	1	--	-
....NAVICULA	52	5	8	1	4	8	13	4	7	13
....NEIDIUM	--	-	--	-	--	-	--	-	*	0
....PINNULARIA	--	-	--	-	*	0	5	2	*	0
...NITZSCHIACEAE										
....NITZSCHIA	64	6	6	1	2	4	76#	23	15#	25
...SURIRELLACEAE										
....SURIRELLA	--	-	--	-	--	-	--	-	2	4
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...MALLOMONADACEAE										
....MALLOMONAS	--	-	--	-	--	-	8	2	--	-
...OCHROMONADACEAE										
....DINOBRYON	--	-	--	-	--	-	3	1	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	24	7	--	-
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	830#	81	750#	96	28#	54	170#	50	*	0
....SPIRULINA	--	-	*	0	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	2	4	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	4	8	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	JUN 23,77 1230		JUL 25,77 1050		AUG 23,77 1430		SEP 22,77 1025	
TOTAL CELLS/ML	450		21		220		0	
DIVERSITY: DIVISION	0.7		0.9		0.6		0.0	
.CLASS	0.7		0.9		0.6		0.0	
..ORDER	0.8		0.9		0.7		0.0	
...FAMILY	0.8		1.6		0.7		0.0	
....GENUS	0.8		1.6		0.7		0.0	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	16	3	--	-	15	7	--	-
....MELOSIRA	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	*	0	--	-	--	-
....COCCONEIS	--	-	--	-	15	7	--	-
...CYMBELLACEAE								
....AMPHORA	6	1	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-
....RHOPALODIA	--	-	--	-	--	-	--	-
...EUNOTIACEAE								
....EUNOTIA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	*	0	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	7#	33	--	-	--	-
...MERIDIONACEAE								
....MERIDION	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....FRUSTULIA	--	-	--	-	--	-	--	-
....GYROSIGMA	--	-	7#	33	*	0	--	-
....NAVICULA	6	1	*	0	*	0	--	-
....NEIDIUM	--	-	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	9	2	*	0	--	-	--	-
...SURIRELLACEAE								
....SURIRELLA	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	--	-	--	-	--	-
...OCHROMONADACEAE								
....DINOBRYON	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	190#	87	--	-
....OSCILLATORIA	390#	87	--	-	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	22	5	7#	33	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01492000 BEAVERDAM BRANCH AT MATTHEWS, MD

LOCATION.--Lat 38°48'41", long 75°58'15", Talbot County, Hydrologic Unit 01060005, on left bank 50 ft (15 m) upstream from bridge on State Highway 328, 1 mi (2 km) west of Matthews, 1.2 mi (1.9 km) upstream from mouth, and 6 mi (10 km) northeast of Easton.

DRAINAGE AREA.--5.85 mi^2 (15.15 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2.33 ft (0.710 m) above mean sea level.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--27 years, 6.57 ft^3/s (0.186 m^3/s), 15.25 in/yr (387 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,200 ft^3/s (62.3 m^3/s) Sept. 12, 1960, gage height, 10.24 ft (3.121 m), from high-water mark in gage shelter, from rating curve extended above 440 ft^3/s (12.5 m^3/s) on basis of contracted-opening measurement at gage height 7.15 ft (2.179 m); no flow at times during many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft^3/s (2.15 m^3/s) Dec. 7, gage height, 2.21 ft (0.674 m), no peak above base of 120 ft^3/s (3.[illegible] m^3/s); no flow part of July 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	4.7	2.3	1.9	.97	3.7	1.9	1.2	.36	.18	.87	.04
2	2.7	2.7	2.1	1.8	.83	3.2	12	1.1	.33	.14	.18	.03
3	5.8	2.3	1.7	1.8	1.1	2.8	8.7	1.1	.24	.14	.11	.02
4	1.6	2.1	1.5	2.1	1.8	3.2	5.8	1.2	.17	.11	.11	.03
5	.77	1.9	1.5	2.3	2.6	3.5	19	2.1	.18	.11	.08	.05
6	.54	1.7	1.4	2.1	1.7	3.0	8.7	3.7	.36	.11	.11	.08
7	.44	1.7	42	2.2	1.0	2.8	5.1	4.6	.33	.22	.06	.11
8	.42	1.6	13	2.1	.94	2.4	4.2	2.1	.16	.18	.05	.08
9	2.1	1.4	4.3	1.9	1.0	2.3	3.5	1.2	2.4	.14	.06	.56
10	1.2	1.4	3.4	18	1.7	2.3	3.5	.95	1.6	.14	.06	.76
11	.62	1.4	3.2	13	2.7	2.3	3.2	.85	.43	.11	.04	.26
12	.50	1.4	3.4	5.0	3.7	2.3	3.0	.68	.32	.32	.04	.11
13	.44	1.6	3.1	2.7	5.5	2.8	2.8	.52	.22	.39	.03	.06
14	.43	1.7	2.5	5.4	3.9	3.5	2.4	.45	.22	.18	.11	.06
15	.38	1.5	2.4	43	3.1	2.6	2.3	.38	.22	.08	.11	.08
16	.37	1.5	2.4	14	2.1	2.3	2.1	.32	.22	.06	.08	.11
17	.71	1.4	2.9	6.3	1.8	1.9	1.9	.32	.40	.06	1.2	.14
18	1.1	1.4	2.5	5.4	1.6	2.8	1.8	.29	2.0	.06	.22	.08
19	.92	1.4	2.3	4.2	1.7	3.0	1.7	.25	1.5	.06	.11	.06
20	17	1.4	3.1	3.7	1.9	2.4	1.7	.26	.32	.06	.08	.06
21	19	1.3	7.4	3.2	1.8	2.3	1.5	.25	.38	.06	.08	.06
22	2.5	1.4	3.0	2.6	1.5	29	1.4	.23	.22	.05	.08	.09
23	1.5	1.3	2.8	2.3	1.9	10	1.3	.23	.14	.02	.06	.11
24	1.3	1.3	2.3	2.1	17	4.2	1.4	.24	.11	.03	1.8	.09
25	2.3	1.3	2.1	1.4	23	3.2	3.7	.80	.14	.03	.36	.07
26	34	1.3	8.3	1.2	5.8	2.8	3.7	1.0	.14	.08	.14	.29
27	4.5	1.3	4.6	2.4	5.1	2.6	2.3	.44	.11	.04	.08	.07
28	2.5	1.6	3.5	3.5	5.4	2.6	1.7	.29	8.0	.03	.06	.07
29	2.0	7.7	3.5	3.9	---	2.6	1.7	.23	1.3	.04	.05	.04
30	1.9	4.1	2.6	1.7	---	2.6	1.4	.25	.26	.11	.05	.04
31	12	---	2.4	1.2	---	2.3	---	.32	---	.11	.05	---
TOTAL	122.84	58.8	143.5	164.4	103.14	119.3	115.4	27.85	22.78	3.45	6.52	3.71
MEAN	3.96	1.96	4.63	5.30	3.68	3.85	3.85	.90	.76	.11	.21	.12
MAX	34	7.7	42	43	23	29	19	4.6	8.0	.39	1.8	.76
MIN	.37	1.3	1.4	1.2	.83	1.9	1.3	.23	.11	.02	.03	.02
CFSM	.68	.34	.79	.91	.63	.66	.66	.15	.13	.02	.04	.02
IN.	.78	.37	.91	1.05	.66	.76	.73	.18	.14	.02	.04	.02

CAL YR 1976 TOTAL 1720.82 MEAN 4.70 MAX 125 MIN .02 CFSM .80 IN 10.94
WTR YR 1977 TOTAL 891.69 MEAN 2.44 MAX 43 MIN .02 CFSM .42 IN 5.67

01492000 BEAVERDAM BRANCH AT MATTHEWS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	AIR TEMPER-ATURE (DEG C)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT							
06...	1200	.52	165	7.1	23.0	17.0	9.7
NOV							
12...	1050	1.3	197	6.8	2.5	4.0	6.2
DEC							
15...	1145	2.5	164	6.9	6.0	.5	5.8
JAN							
12...	1215	4.7	158	6.5	-1.0	.0	6.2
FEB							
22...	1355	2.0	135	7.8	14.5	2.0	--
MAR							
30...	1000	2.6	109	7.1	25.0	15.5	9.6
JUN							
21...	1200	.55	145	6.6	23.0	19.5	5.9
AUG							
17...	1000	.16	370	7.0	30.0	23.0	3.4
SEP							
19...	1110	.07	170	6.7	24.0	23.0	6.6

01493000 UNICORN BRANCH NEAR MILLINGTON, MD

LOCATION.--Lat 39°14'59", long 75°51'40", Kent County, Hydrologic Unit 02060002, on right bank 20 ft (6 m) upstream from bridge on State Highway 313, 0.9 mi (1.4 km) upstream from mouth, and 1.4 mi (2.3 km) southwest of Millington.

DRAINAGE AREA.--22.3 mi^2 (57.8 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1948 to current year.

REVISED RECORDS.--WSP 1382: 1952(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.57 ft (1.088 m) above mean sea level.

REMARKS.--Water-discharge records fair. Occasional regulation at low flow by fish hatchery above station.

AVERAGE DISCHARGE.--29 years, 24.3 ft^3/s [illegible]88 m^3/s), 14.80 in/yr (376 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft^3/s (30.0 m^3/s) Sept. 12, 1960, gage height, 7.17 ft (2.185 m); no flow for part of each day June 13, 14, 1965, caused by regulation at Unicorn Lake Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108 ft^3/s (3.06 m^3/s) Mar. 23, gage height, 3.29 ft (1.003 m), no peak above base of 180 ft^3/s (5.1 m^3/s); minimum, 0.85 ft^3/s (0.024 m^3/s) Jan. 8, gage height, 1.62 ft (0.494 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	29	12	16	10	21	14	10	7.3	5.0	5.0	4.4
2	19	19	20	16	10	18	18	9.8	9.7	5.3	4.7	4.2
3	16	16	22	15	11	16	29	9.7	8.1	5.0	4.4	4.1
4	13	15	21	15	12	17	23	10	7.0	5.3	4.2	4.1
5	10	14	20	15	13	17	33	10	7.0	5.3	4.1	5.1
6	9.4	13	15	14	12	16	36	13	7.8	5.6	4.0	5.3
7	8.5	13	9.2	6.9	10	15	24	14	8.0	6.7	3.9	7.8
8	8.3	13	16	.87	9.0	14	18	11	7.0	6.4	3.8	5.6
9	13	13	25	1.0	11	14	16	9.2	18	6.4	3.5	5.6
10	10	12	18	17	11	13	15	9.2	12	6.4	4.8	7.2
11	8.9	12	17	26	12	13	14	8.9	9.0	6.0	5.8	5.4
12	8.4	12	17	21	13	13	14	9.3	7.9	5.6	5.0	4.8
13	8.3	12	16	20	15	14	13	8.1	7.5	5.6	5.3	4.8
14	7.8	12	15	19	16	16	12	7.7	7.0	5.6	7.3	4.6
15	7.9	11	14	19	15	15	12	7.6	7.1	5.3	6.7	4.5
16	7.5	11	14	26	14	13	12	7.6	7.2	5.0	5.3	4.5
17	8.5	11	16	21	12	13	12	7.6	6.9	5.0	7.5	5.1
18	8.3	11	16	19	12	17	11	8.4	7.9	5.0	8.5	5.0
19	7.9	11	15	17	12	22	11	11	6.7	5.0	5.8	4.3
20	19	11	15	16	12	18	12	9.1	6.6	5.0	5.3	4.1
21	39	11	15	14	12	16	11	8.3	6.7	5.0	5.0	4.0
22	19	11	15	13	11	33	10	7.7	6.4	4.7	4.8	4.0
23	13	11	15	12	11	89	10	6.6	6.4	4.1	5.0	4.0
24	12	11	16	12	20	47	11	5.4	5.6	4.1	7.9	4.1
25	14	11	15	13	82	29	13	6.6	6.0	4.4	8.8	4.6
26	42	11	15	14	49	22	15	8.0	6.4	5.6	5.8	4.4
27	30	11	16	13	29	19	14	7.1	6.0	5.3	5.1	5.0
28	18	11	16	14	25	18	12	7.0	6.4	4.4	4.9	4.9
29	15	14	16	13	---	18	12	6.6	6.0	4.1	4.7	4.2
30	14	14	16	11	---	17	11	6.6	5.6	4.1	4.1	4.1
31	25	---	16	10	---	15	---	6.7	---	5.4	4.0	---
TOTAL	463.7	387	504.2	459.77	481.0	638	468	267.8	227.2	161.7	165.0	143.8
MEAN	15.0	12.9	16.3	14.8	17.2	20.6	15.6	8.64	7.57	5.22	5.32	4.79
MAX	42	29	25	26	82	89	36	14	18	6.7	8.8	7.8
MIN	7.5	11	9.2	.87	9.0	13	10	5.4	5.6	4.1	3.5	4.0
CFSM	.67	.58	.73	.66	.77	.92	.70	.39	.34	.23	.24	.22
IN.	.77	.65	.84	.77	.80	1.06	.78	.45	.38	.27	.28	.24

CAL YR 1976 TOTAL 7889.00 MEAN 21.6 MAX 288 MIN 6.0 CFSM .97 IN 13.16
WTR YR 1977 TOTAL 4367.17 MEAN 12.0 MAX 89 MIN .87 CFSM .54 IN 7.28

01493000 UNICORN BRANCH NEAR MILLINGTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
NOV							
12...	1530	12	140	7.3	5.0	5.5	6.9
DEC							
08...	1230	11	140	6.7	-4.0	2.5	5.9
JAN							
12...	1515	21	146	7.0	-3.0	3.0	6.5
FEB							
22...	1140	11	101	7.4	8.0	6.0	--
MAR							
30...	1520	17	99	7.1	28.0	20.0	8.8
MAY							
09...	1555	8.6	105	7.7	9.5	15.0	9.2
JUN							
21...	1610	6.5	98	7.3	31.5	26.0	7.0
AUG							
08...	1440	3.7	193	8.3	32.5	30.0	7.0
SEP							
19...	1645	4.3	103	8.7	30.0	23.0	8.8

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD

LOCATION.--Lat 39°16'48", long 76°00'54", Kent County, Hydrologic Unit 02060002, on right bank 200 ft (61 m) upstream from highway bridge, 2 mi (3 km) southwest of Kennedyville, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--12.7 mi² (32.9 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1552: 1952, 1953(P), 1954(M), 1955, 1956-57(M). WDR MD-DE-76-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

REMARKS.--Water-discharge records good except those for winter period, which are fair.

AVERAGE DISCHARGE.--26 years, 10.5 ft³/s (0.297 m³/s), 11.23 in/yr (285 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s (212 m³/s) June 22, 1972, gage height, 13.07 ft (3.984 m), from rating curve extended above 590 ft³/s (16.7 m³/s) on basis of Type IV culvert and flow-over-road measurement of peak flow; minimum, 0.60 ft³/s (0.017 m³/s) Aug. 28, 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 highest since at least 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 86 ft³/s (2.44 m³/s) Mar. 22, gage height, 2.65 ft (0.808 m), no peak above base of 200 ft³/s (5.6 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) Aug. 7, 8, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	15	5.3	4.2	3.9	6.4	4.5	4.1	3.0	2.5	2.3	2.2
2	10	7.5	5.6	4.1	3.9	5.9	13	4.0	17	2.4	2.3	2.2
3	11	6.9	4.7	4.5	4.3	5.4	14	4.0	5.0	2.1	2.1	2.1
4	8.3	6.7	4.4	5.4	5.4	8.0	7.0	3.9	4.0	2.3	2.0	2.1
5	4.8	6.4	4.8	5.2	7.0	8.0	17	4.9	3.1	2.3	1.9	2.2
6	4.5	6.0	5.1	4.6	4.8	6.4	11	11	4.1	3.0	1.8	2.4
7	4.5	6.2	31	5.6	4.2	5.9	6.2	15	4.6	5.1	1.7	2.7
8	4.4	6.2	23	5.4	3.6	5.4	5.7	5.2	3.3	3.5	1.6	2.6
9	11	6.0	7.2	5.4	3.6	5.0	5.0	4.1	26	2.7	1.9	3.9
10	9.2	6.0	6.6	12	4.2	5.0	5.0	4.0	49	2.6	5.4	5.7
11	5.1	6.0	7.0	18	5.0	5.0	5.0	3.6	6.7	2.5	14	3.0
12	4.8	6.0	7.3	10	8.0	5.0	4.9	3.6	3.9	2.4	3.8	2.6
13	4.8	6.0	6.4	9.0	10	7.0	4.5	3.4	3.4	2.8	3.2	2.6
14	5.0	6.0	4.8	8.5	11	8.0	4.5	3.1	3.0	2.4	6.0	2.5
15	4.6	6.0	5.6	12	10	5.4	4.2	2.9	3.4	2.1	6.2	2.4
16	4.5	6.0	6.4	15	7.0	5.4	4.2	2.9	3.3	1.9	3.2	2.6
17	5.0	6.0	6.6	12	5.0	4.6	4.1	3.0	3.2	2.0	17	3.1
18	5.9	6.8	5.7	10	4.5	10	4.1	3.0	4.4	3.9	30	2.8
19	4.9	5.5	5.5	8.2	4.5	8.5	4.1	4.4	2.7	2.5	5.4	2.5
20	15	5.5	6.8	7.2	4.3	5.9	4.1	4.1	2.5	2.7	3.4	2.4
21	33	5.4	8.4	6.2	4.3	5.9	4.1	3.5	2.8	2.8	2.9	2.3
22	10	5.4	4.9	5.4	4.3	35	4.2	3.1	2.5	2.2	2.8	2.6
23	6.1	5.4	5.4	5.0	5.9	37	3.9	2.9	2.0	1.8	2.5	2.8
24	6.3	5.3	4.8	4.6	15	8.3	4.9	2.6	1.9	1.8	10	2.9
25	8.8	5.4	4.5	5.0	57	6.1	9.1	3.6	2.0	2.1	18	2.9
26	38	5.4	12	6.0	15	5.5	6.9	3.7	2.2	3.7	4.2	2.9
27	18	5.9	8.1	5.2	9.1	5.4	4.8	2.8	2.0	2.2	3.2	2.8
28	7.8	5.9	6.6	7.0	8.0	5.9	4.7	2.8	4.4	2.0	2.8	3.3
29	6.8	9.6	6.9	5.4	---	6.0	5.9	2.6	8.0	1.9	2.6	2.7
30	6.5	7.1	5.2	4.7	---	5.4	4.4	2.5	3.0	3.2	2.4	2.6
31	21	---	5.2	4.3	---	5.0	---	2.9	---	2.8	2.3	---
TOTAL	302.6	193.5	231.8	225.1	232.8	251.7	185.0	127.2	186.4	80.2	168.9	82.4
MEAN	9.76	6.45	7.48	7.26	8.31	8.12	6.17	4.10	6.21	2.59	5.45	2.75
MAX	38	15	31	18	57	37	17	15	49	5.1	30	5.7
MIN	4.4	5.3	4.4	4.1	3.6	4.6	3.9	2.5	1.9	1.8	1.6	2.1
CFSM	.77	.51	.59	.57	.65	.64	.49	.32	.49	.20	.43	.22
IN.	.89	.57	.68	.66	.68	.74	.54	.37	.55	.23	.49	.24

CAL YR 1976 TOTAL 3731.1 MEAN 10.2 MAX 387 MIN 3.2 CFSM .80 IN 10.93
WTR YR 1977 TOTAL 2267.6 MEAN 6.21 MAX 57 MIN 1.6 CFSM .49 IN 6.64

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)
OCT 22...	1045	9.4	141	6.5	10.0	8.0	--	15	8.8	13
NOV 18...	1330	6.1	124	6.9	12.0	4.0	--	30	--	210
DEC 21...	1400	8.7	119	7.0	.0	1.5	--	45	12.4	940
JAN 14...	1130	8.3	130	7.3	2.5	1.0	--	100	--	70
FEB 23...	1120	5.4	144	6.9	16.0	3.0	--	5	12.6	133
MAR 23...	1500	26	120	6.9	12.0	11.0	--	130	10.5	E10000
APR 26...	1230	7.3	115	7.4	--	--	--	30	7.7	2500
MAY 23...	1540	2.9	125	7.5	19.0	30.0	1	0	7.1	880
JUN 23...	1250	2.1	--	7.4	28.0	17.5	2	30	7.4	600
JUL 25...	1230	1.9	119	6.6	25.5	22.0	--	50	6.5	940
AUG 23...	1045	2.7	130	7.5	25.0	20.0	1	30	7.5	1000
SEP 22...	1345	2.5	150	7.3	19.5	18.0	2	10	9.0	1500

DATE	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT 22...	8120	41	7	11	3.4	4.4	7.5	42	9.9	13
NOV 18...	200	46	11	13	3.2	4.3	3.4	42	4.5	9.1
DEC 21...	E10000	40	9	11	3.0	3.9	3.3	37	7.0	9.6
JAN 14...	90	41	1	11	3.3	5.1	7.0	49	7.8	11
FEB 23...	125	48	17	13	3.8	4.5	3.5	38	4.9	8.9
MAR 23...	E10000	39	16	11	2.9	3.9	10	28	12	11
APR 26...	2000	50	17	13	4.2	4.8	4.0	40	5.4	8.8
MAY 23...	1600	40	6	12	2.4	4.5	2.9	41	4.1	7.0
JUN 23...	340	39	12	11	2.9	4.3	2.9	33	3.5	8.4
JUL 25...	3900	39	10	11	2.8	4.7	3.2	35	2.8	8.7
AUG 23...	1600	42	11	12	2.9	4.6	.8	38	3.5	9.9
SEP 22...	2800	42	11	12	2.9	5.0	3.7	38	3.0	9.2

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT										
22...	.3	11	89	82	.73	.13	1500	170	140	120
NOV										
18...	.1	12	61	71	1.5	.05	1400	60	300	330
DEC										
21...	.1	11	74	67	1.4	.10	2400	20	300	300
JAN										
14...	.1	11	94	81	2.0	.15	2900	130	390	400
FEB										
23...	.1	11	78	69	1.6	.08	2300	90	540	630
MAR										
23...	.1	6.0	92	71	1.9	.64	5200	140	240	150
APR										
26...	.1	8.8	75	70	1.1	.09	2600	660	390	390
MAY										
23...	.1	12	123	66	1.6	.10	2900	250	330	270
JUN										
23...	.1	12	93	64	1.6	.07	2100	2000	180	180
JUL										
25...	.1	12	82	65	1.4	.06	2200	2100	220	220
AUG										
23...	.1	12	74	67	1.2	.06	2200	1900	190	200
SEP										
22...	.1	13	71	69	1.2	.04	1000	740	150	140

01495000 BIG ELK CREEK AT ELK MILLS, MD

LOCATION.--Lat 39°39'26", long 75°49'20", Cecil County, Hydrologic Unit 02060002, on right bank 100 ft (30 m) downstream from highway bridge at Elk Mills, 3.5 mi (5.6 km) north of Elkton, and 7 mi (11 km) upstream from confluence with Little Elk Creek.

DRAINAGE AREA.--52.6 mi² (136.2 km²).

WATER-DISCHARGE RECORD

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1932-33, 1934(M), 1935, 1936(M), 1938, 1939-40(M), 1942(M), 1943-51, 1952-53(P).

GAGE.--Water-stage recorder. Datum of gage is 68.5 ft (20.88 m) above mean sea level. Apr. 10, 1932, to May 16, 1946, nonrecording gage at bridge 100 ft (30 m) upstream at same datum.

REMARKS.--Water-discharge records good except those for January and February, which are fair. Slight diurnal fluctuation caused by mills above station.

AVERAGE DISCHARGE.--45 years, 69.1 ft³/s (1.957 m³/s), 17.84 in/yr (453 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) July 5, 1937, gage height, 14.5 ft (4.42 m), from floodmarks, from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of velocity-area and conveyance studies; minimum, 4.5 ft³/s (0.13 m³/s) Jan. 21, 1955, (result of freezeup); minimum daily, 4.8 ft³/s (0.14 m³/s) Sept. 8-10, 1966; minimum gage height observed, 2.09 ft (0.637 m) Sept. 19, 22-24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 19 ft (5.8 m) in June 1884, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,670 ft³/s (47.3 m³/s) Mar. 22, gage height, 6.28 ft (1.914 m), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement at gage height 13.46 ft (4.103 m), no peak above base of 1,700 ft³/s (48.1 m³/s); minimum, 14 ft³/s (0.40 m³/s) Aug. 9; minimum daily, 15 ft³/s (0.42 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	85	32	26	22	53	50	47	66	32	19	25
2	115	61	38	28	22	48	158	46	258	28	18	24
3	94	55	30	28	24	43	137	46	51	26	38	22
4	56	54	36	31	30	73	86	44	38	25	30	21
5	36	49	34	31	27	117	643	56	34	25	19	21
6	33	47	36	29	23	69	200	75	37	73	17	68
7	31	45	263	29	21	57	97	90	41	165	17	43
8	31	44	112	28	20	50	77	89	33	45	16	25
9	280	43	60	30	23	46	68	56	89	33	15	23
10	92	43	60	100	30	45	63	51	229	29	23	24
11	49	42	51	170	200	43	60	49	57	27	69	22
12	40	41	50	110	400	42	56	48	43	27	27	21
13	37	40	49	60	350	332	54	46	38	29	23	22
14	36	40	43	35	200	389	52	42	36	34	38	21
15	34	40	47	30	100	123	48	41	41	24	29	21
16	34	39	45	26	50	84	47	40	37	23	24	22
17	35	38	40	24	27	67	47	39	35	22	38	25
18	37	39	41	24	23	97	45	39	44	24	51	26
19	34	38	41	29	22	93	45	42	36	22	24	23
20	187	38	42	29	23	71	45	40	33	21	21	129
21	326	36	59	28	20	71	45	38	32	20	20	35
22	69	36	45	26	19	603	44	36	30	18	96	27
23	50	35	46	24	30	291	44	36	29	17	34	26
24	46	35	32	23	100	115	47	35	28	17	34	26
25	68	35	39	25	389	84	69	36	29	20	53	40
26	154	36	47	27	82	73	65	35	30	41	29	37
27	65	37	39	27	67	67	54	32	28	20	25	30
28	52	36	41	28	67	66	50	30	32	18	24	33
29	48	53	38	21	---	66	61	29	208	18	23	28
30	45	51	29	21	---	60	48	29	43	19	22	25
31	241	---	26	22	---	55	---	31	---	20	21	---
TOTAL	2539	1311	1591	1169	2411	3493	2605	1393	1765	962	937	935
MEAN	81.9	43.7	51.3	37.7	86.1	113	86.8	44.9	58.8	31.0	30.2	31.2
MAX	326	85	263	170	400	603	643	90	258	165	96	129
MIN	31	35	26	21	19	42	44	29	28	17	15	21
CFSM	1.56	.83	.98	.72	1.64	2.15	1.65	.85	1.12	.59	.57	.59
IN.	1.80	.93	1.13	.83	1.71	2.47	1.84	.99	1.25	.68	.66	.66

CAL YR 1976 TOTAL 25736 MEAN 70.3 MAX 846 MIN 18 CFSM 1.34 IN 18.20
WTR YR 1977 TOTAL 21111 MEAN 57.8 MAX 643 MIN 15 CFSM 1.10 IN 14.93

01495000 BIG ELK CREEK AT ELK MILLS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT 07...	1210	32	--	7.0	20.5	17.0	--
NOV 11...	1010	42	133	7.1	6.5	4.0	6.6
DEC 16...	1125	44	154	7.5	6.5	--	4.9
FEB 17...	1130	25	122	8.1	-4.0	1.0	13.1
MAY 13...	1635	47	105	9.4	27.0	21.0	9.2
JUN 28...	1400	29	103	8.6	27.0	23.5	11.3
AUG 12...	1500	24	281	7.4	26.5	24.0	8.2
SEP 14...	1120	21	180	8.0	21.0	19.0	9.2

01496000 NORTHEAST CREEK AT LESLIE, MD

LOCATION.--Lat 39°37'38", long 75°56'40", Cecil County, Hydrologic Unit 02060002, on left bank at downstream side of highway bridge, 0.7 mi (1.1 km) northeast of Leslie, 1.5 mi (2.4 km) southeast of Bay View, and 1.7 mi (2.7 km) upstream from confluence with Little Northeast Creek.

DRAINAGE AREA.--24.3 mi^2 (62.9 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WSP 1232: 1949-51.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 115.0 ft (35.05 m) above mean sea level.

REMARKS.--Water-discharge records fair. Slight diurnal fluctuation at low flow caused by powerplant above station.

AVERAGE DISCHARGE.--29 years, 35.1 ft^3/s (0.994 m^3/s), 19.62 in/yr (498 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft^3/s (136 m^3/s) June 22, 1972, gage height, 8.41 ft (2.563 m), from rating curve extended above 2,300 ft^3/s (65.1 m^3/s) on basis of contracted-opening measurement at gage height 7.74 ft (2.359 m); minimum, 1.2 ft^3/s (0.034 m^3/s) Sept. 8, 9, 10, 11, 12, 13, 14, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	(m^3/s)	Gage height (ft)	(m)	Date	Time	Discharge (ft^3/s)	(m^3/s)	Gage height (ft)	(m)
Mar. 13	2315	826	23.4	3.93	1.198	June 2	1030	965	27.3	4.17	1.271
Mar. 22	2315	*1120	31.7	4.41	1.344						

Minimum discharge, 5.1 ft^3/s (0.14 m^3/s) July 24, 28, 29, 30, Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	46	15	11	9.4	23	21	20	15	12	5.4	6.4
2	29	26	13	12	9.4	20	132	20	451	11	5.4	6.8
3	40	22	13	14	10	18	96	20	30	10	8.0	6.8
4	18	21	13	14	12	48	47	18	18	9.9	11	6.4
5	11	20	12	12	12	69	530	20	15	9.9	6.8	6.4
6	8.2	18	12	11	9.8	33	96	60	15	11	6.0	22
7	7.3	18	235	11	9.2	27	56	56	18	25	5.6	32
8	7.3	18	85	10	9.2	24	37	38	14	17	5.4	11
9	289	18	24	10	9.8	21	30	22	26	12	5.2	9.3
10	60	17	19	53	12	20	29	20	199	11	10	9.3
11	22	16	20	150	116	20	27	18	29	9.9	20	8.8
12	17	15	20	35	250	20	26	17	20	9.3	8.0	7.7
13	15	15	20	16	144	293	26	16	17	9.9	7.2	7.3
14	13	15	16	13	70	254	25	15	16	11	11	7.3
15	12	15	16	12	34	46	23	14	18	9.3	9.0	7.3
16	12	15	16	11	23	32	22	14	17	7.7	7.3	7.3
17	12	14	17	10	18	26	20	13	15	7.3	12	8.8
18	14	15	16	10	15	50	22	14	24	7.7	15	8.8
19	12	15	15	11	16	43	20	15	16	7.7	8.0	8.2
20	114	15	16	12	16	29	20	15	14	6.8	6.4	34
21	412	14	26	12	13	32	20	14	13	6.8	6.0	13
22	34	14	20	11	12	372	20	13	12	6.0	30	11
23	23	13	15	10	13	263	20	12	12	5.4	9.0	11
24	20	13	15	10	18	43	22	12	11	5.1	10	12
25	39	14	16	10	200	31	28	12	11	6.8	16	16
26	117	14	15	11	34	28	34	12	12	9.9	8.2	15
27	33	15	13	11	29	26	25	11	11	6.4	6.8	13
28	24	15	14	10	30	26	22	11	13	5.4	6.4	13
29	21	22	13	11	---	28	25	10	50	5.1	6.4	12
30	20	20	12	10	---	26	21	9.4	15	5.7	6.4	9.9
31	226	---	11	9.4	---	25	---	10	---	6.4	6.4	---
TOTAL	1719.8	528	783	553.4	1153.8	2016	1542	571.4	1147	284.4	284.3	347.8
MEAN	55.5	17.6	25.3	17.9	41.2	65.0	51.4	18.4	38.2	9.17	9.17	11.6
MAX	412	46	235	150	250	372	530	60	451	25	30	34
MIN	7.3	13	11	9.4	9.2	18	20	9.4	11	5.1	5.2	6.4
CFSM	2.28	.72	1.04	.74	1.70	2.68	2.12	.76	1.57	.38	.38	.48
IN.	2.63	.81	1.20	.85	1.77	3.09	2.36	.87	1.76	.44	.44	.53

CAL YR 1976 TOTAL 12914.9 MEAN 35.3 MAX 656 MIN 6.1 CFSM 1.45 IN 19.77
WTR YR 1977 TOTAL 10930.9 MEAN 29.9 MAX 530 MIN 5.1 CFSM 1.23 IN 16.73

01496000 NORTHEAST CREEK AT LESLIE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	AIR TEMPER- ATURE (DEG C)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)
OCT 07...	1035	7.3	--	7.0	18.0	16.5	--
NOV 10...	1505	16	156	7.1	12.0	6.0	6.4
DEC 16...	1300	16	169	7.6	6.0	2.0	6.2
APR 07...	1010	67	150	8.5	11.0	9.5	12.5
MAY 13...	1500	16	122	8.3	28.0	20.0	9.0
JUN 02...	1145	1030	83	6.8	24.5	18.0	9.0
27...	1210	11	210	8.0	26.0	22.5	9.8
SEP 13...	1345	7.1	126	8.7	23.0	18.0	10.5

01496200 PRINCIPIO CREEK NEAR PRINCIPIO FURNACE, MD

LOCATION.--Lat 39°37'34", long 76°02'27", Cecil County, Hydrologic Unit 02060002, on left bank, 55 ft (17 m) downstream from bridge on Belvedere Road, 3.5 mi (5.6 km) north of Principio Furnace, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--9.03 mi² (23.39 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 215 ft (65.5 m), from topographic map.

REMARKS.--Water-stage records good except those for winter period, which are fair.

AVERAGE DISCHARGE.--10 years, 13.5 ft³/s (0.382 m³/s), 20.30 in/yr (516 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,060 ft³/s (200 m³/s) Aug. 4, 1969, gage height, 9.26 ft (2.822 m), from rating curve extended above 170 ft³/s (4.81 m³/s) on basis of slope-area measurements at gage heights 8.89 ft (2.710 m) and 9.26 ft (2.822 m); minimum, 1.6 ft³/s (0.045 m³/s) Oct. 4, 5, 1968, July 17, 18, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	0515	360	10.2	4.32	1.317	Mar. 22	1400	*745	21.1	5.57	1.698
Oct. 20	2045	626	17.7	5.23	1.594	Apr. 5	0345	378	10.7	4.39	1.338
Oct. 31	0700	386	10.9	4.42	1.347	June 2	0130	603	17.1	5.16	1.573
Dec. 7	1030	412	11.7	4.52	1.378	June 9	2200	363	10.3	4.33	1.320
Feb. 24	2100	339	9.60	4.24	1.292	Aug. 22	0230	626	17.7	5.23	1.594
Mar. 13	1945	493	14.0	4.80	1.463						

Minimum discharge, 1.9 ft³/s (0.054 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	10	5.7	4.6	4.0	7.9	9.3	9.6	41	3.9	2.4	3.1
2	15	8.2	5.4	4.3	4.5	7.2	58	9.8	80	3.6	2.4	2.5
3	9.7	7.7	4.7	4.3	6.0	6.9	20	10	6.3	3.4	6.7	2.4
4	4.1	7.4	4.7	5.0	7.0	24	31	9.4	5.4	3.4	2.8	2.3
5	3.5	6.9	4.7	4.3	6.0	16	140	10	5.1	3.3	2.5	2.3
6	3.4	6.5	5.2	4.3	5.0	10	20	26	5.6	14	2.3	4.9
7	3.2	6.5	84	5.0	4.5	9.1	13	11	5.5	8.7	2.3	4.5
8	3.3	6.4	10	4.3	5.0	8.2	12	9.1	4.9	4.3	2.2	2.5
9	109	6.0	7.1	4.0	6.0	7.8	11	7.3	46	3.5	2.4	2.4
10	6.8	6.2	6.7	34	16	7.5	10	6.9	35	3.3	4.1	2.6
11	4.7	6.0	6.8	18	50	7.3	9.8	6.6	7.4	3.1	5.7	2.3
12	4.2	6.0	6.9	10	29	7.1	9.5	6.3	5.9	3.2	4.0	2.2
13	3.9	5.7	6.3	8.0	24	151	9.1	6.2	5.6	3.2	3.2	2.2
14	3.8	5.7	6.0	6.0	11	36	8.7	6.0	5.3	2.9	4.8	2.2
15	3.7	5.7	5.9	8.0	8.0	14	8.4	5.8	5.9	2.8	3.2	2.1
16	3.7	5.7	6.0	7.0	6.5	11	8.2	5.7	5.3	2.7	2.7	2.2
17	3.9	5.6	6.0	6.0	6.3	9.7	8.0	5.7	7.9	2.9	8.5	2.6
18	3.9	5.7	5.7	5.5	6.5	19	7.9	5.9	10	3.3	3.8	2.4
19	3.8	5.5	5.5	5.0	6.0	12	7.9	6.2	5.4	2.7	2.7	2.3
20	131	5.4	6.2	6.0	6.0	11	7.6	5.9	4.9	2.7	2.5	3.5
21	36	5.3	7.9	5.5	5.5	10	7.6	5.5	4.7	2.6	2.4	2.4
22	8.7	5.3	6.8	5.0	6.8	178	7.6	5.3	4.3	2.4	64	2.4
23	7.1	5.2	5.8	4.7	6.0	25	7.7	5.2	4.2	2.3	3.7	2.5
24	7.1	5.2	5.5	4.7	68	14	8.4	5.2	4.1	2.3	15	3.8
25	9.9	5.2	6.0	6.5	31	12	9.6	5.5	4.2	3.3	5.4	4.6
26	39	5.2	5.7	6.0	10	11	12	5.7	4.2	3.4	3.2	2.9
27	8.6	5.5	5.6	5.0	9.6	11	9.7	5.6	3.9	2.5	2.9	2.7
28	7.3	5.4	5.2	5.5	9.5	11	9.5	5.8	28	2.4	2.7	2.7
29	6.8	8.3	5.2	4.5	---	11	10	6.1	14	2.4	2.6	2.4
30	6.6	6.1	5.0	4.0	---	10	9.5	6.5	4.2	2.6	2.5	2.4
31	75	---	4.8	3.8	---	9.6	---	7.0	---	2.6	2.5	---
TOTAL	550.7	185.5	263.0	208.8	363.7	685.3	501.0	232.8	374.2	109.7	178.1	82.3
MEAN	17.8	6.18	8.48	6.74	13.0	22.1	16.7	7.51	12.5	3.54	5.75	2.74
MAX	131	10	84	34	68	178	140	26	80	14	64	4.9
MIN	3.2	5.2	4.7	3.8	4.0	6.9	7.6	5.2	3.9	2.3	2.2	2.1
CFSM	1.97	.68	.94	.75	1.44	2.45	1.85	.83	1.38	.39	.64	.30
IN.	2.27	.76	1.08	.86	1.50	2.82	2.06	.96	1.54	.45	.73	.34

CAL YR 1976 TOTAL 4486.4 MEAN 12.3 MAX 181 MIN 3.2 CFSM 1.36 IN 18.48
WTR YR 1977 TOTAL 3735.1 MEAN 10.2 MAX 178 MIN 2.1 CFSM 1.13 IN 15.39

01496200 PRINCIPIO CREEK NEAR PRINCIPIO FURNACE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT 06...	1425	3.3	--	7.0	22.5	17.5	--
NOV 10...	1340	6.2	159	6.9	14.0	6.5	5.3
DEC 13...	1305	6.3	152	--	-1.5	3.0	--
FEB 17...	1430	8.0	140	7.2	-1.0	3.5	12.8
APR 04...	1320	14	124	7.4	6.5	8.0	11.6
MAY 13...	1000	6.5	125	8.0	25.0	15.5	9.1
JUN 27...	1420	4.0	145	8.4	28.5	25.5	9.3
AUG 12...	1320	3.5	320	7.4	26.5	24.5	7.9
SEP 14...	1610	2.2	129	8.5	23.0	19.0	10.0

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD

LOCATION.--Lat 39°39'31", long 76°10'28", Harford County, Hydrologic Unit 02050306, at downstream side of Conowingo Dam, 1 mi (1.6 km) southwest of Conowingo, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--27,100 mi^2 (70,190 km^2).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5.00 ft (1.524 m) above mean sea level.

REMARKS.--Records good. Flow regulated by Conowingo Reservoir beginning October 1928, usable capacity, 55,070,000,000 gal (208.4 hm^3); dead storage, 45,290,000,000 gal (171.4 hm^3). Records do not include a small infrequent diversion above station to augment municipal supply of city of Baltimore. Records of diversion available from Baltimore Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130,000 ft^3/s (32,000 m^3/s) June 24, 1972, gage height, 36.83 ft (11.226 m); minimum, 144 ft^3/s (4.08 m^3/s) Mar. 2, 1969, gage height, 6.28 ft (1.914 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 306,000 ft^3/s (8,670 m^3/s) Oct. 10, gage height, 23.99 ft (7.312 m); minimum, 738 ft^3/s (20.9 m^3/s) Dec. 24, gage height, 7.23 ft (2.204 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22200	71100	35100	1370	10200	117000	149000	53200	20300	20200	17000	15000
2	17600	79800	28500	1020	11100	119000	144000	45700	19800	11700	15100	13300
3	23400	72900	25000	17000	15600	99900	152000	40600	14900	2720	13500	5010
4	45300	79400	8670	12600	12000	85700	222000	39500	7420	4690	13800	1630
5	30400	69700	1030	18100	4220	141000	234000	34900	7310	17300	16900	1370
6	28300	73000	13700	17600	2080	203000	188000	44500	7870	15100	5050	10600
7	30300	44100	28800	19500	17800	190000	153000	33500	14300	23100	3060	12000
8	30000	59700	44600	4800	14100	161000	135000	27100	13500	18500	13200	11700
9	50800	55100	46500	4010	12000	125000	94200	50200	14800	11300	12400	12800
10	237000	47700	51800	21300	13900	90800	79600	39100	16300	4710	14900	1210
11	245000	45400	43700	17000	16500	81000	81900	36100	7400	26900	20000	1090
12	190000	50200	30500	19900	1890	75000	75400	35100	7400	23300	20300	6090
13	139000	46700	42700	17600	7820	76000	64100	43400	17400	24400	12300	7860
14	103000	35700	38800	11900	21700	156000	60000	34000	18100	29200	1650	8180
15	84400	41700	35000	984	27400	219000	51400	16200	15800	27100	18800	12800
16	74200	42000	32400	2350	21300	211000	45700	42000	15900	24500	16700	11700
17	55400	39300	35400	27300	24500	175000	32000	34400	13800	8420	17800	4490
18	53800	37200	29700	16400	21700	153000	42200	28200	7500	24100	19100	1540
19	46000	41300	18100	9230	12100	129000	36800	24300	7420	20900	23300	16200
20	50300	37100	32900	11900	10300	104000	35100	27600	8760	17300	4630	31500
21	61000	31300	34600	14300	22400	104000	27300	16500	18600	34200	6830	36200
22	81500	41900	29300	3110	20400	131000	31300	11600	13100	19800	22500	44700
23	89300	38300	23100	3440	18100	155000	28400	23900	14400	24000	16500	65600
24	112000	45700	20200	16600	27800	165000	10400	19800	16600	13700	17100	61100
25	99400	25000	1040	13600	57500	142000	54600	20600	1470	24700	15100	65000
26	98300	32900	8950	14900	60400	104000	63900	22700	1430	25500	15700	83500
27	103000	30900	20300	13900	96100	79600	83900	18800	16000	20800	5760	101000
28	99000	29200	24600	11300	123000	77900	83700	12700	18000	24800	1350	157000
29	85800	35400	41200	4960	---	78000	75900	7480	18500	25200	11600	123000
30	78400	38100	25500	4750	---	89300	62900	7430	18300	11600	15300	93300
31	71700	---	10700	17300	---	139000	---	20200	---	6150	12400	---
TOTAL	2535800	1417800	862390	370024	703910	3976200	2597700	911310	392380	585890	419630	1016470
MEAN	81800	47260	27820	11940	25140	128300	86590	29400	13080	18900	13540	33880
MAX	245000	79800	51800	27300	123000	219000	234000	53200	20300	34200	23300	157000
MIN	17600	25000	1030	984	1890	75000	10400	7430	1430	2720	1350	1090
CFSM	3.02	1.74	1.03	.44	.93	4.73	3.20	1.09	.48	.70	.50	1.25
IN.	3.48	1.95	1.18	.51	.97	5.46	3.57	1.25	.54	.80	.58	1.40

CAL YR 1976 TOTAL 16697780 MEAN 45620 MAX 251000 MIN 1010 CFSM 1.68 IN 22.92
WTR YR 1977 TOTAL 15789504 MEAN 43260 MAX 245000 MIN 984 CFSM 1.60 IN 21.67

01578500 OCTORARO CREEK NEAR RISING SUN, MD

LOCATION.--Lat 39°41'24", long 76°07'43", Cecil County, Hydrologic Unit 02050306, on right bank at downstream side of Porter Bridge, 300 ft (91 m) downstream from Love Run, 3.5 mi (5.6 km) west of Rising Sun, and 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--193 mi² (500 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1932 to September 1958. Annual maximum, water years 1963-68. December 1968 to September 1977 (discontinued). Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1051: Drainage area. WSP 1432: 1933, 1935, 1936(M), 1937-38, 1939(M), 1944-45, 1947(M), 1949.

GAGE.--Water-stage recorder. Datum of gage is 73.77 ft (22.485 m) above mean sea level.

REMARKS.--Water-discharge records good except those for winter period, which are fair. Slight diurnal fluctuation caused by mills above station. Flow regulated by Chester-Octoraro Reservoir (formerly Pine Grove Reservoir), beginning Feb. 22, 1951, capacity, 2,800,000,000 gal (10.60 hm³). Diversion above station by Octoraro Water Co., and from Chester-Octoraro Reservoir beginning November 1951 by Chester Municipal Authority for municipal supply of Chester and surrounding boroughs.

AVERAGE DISCHARGE.--34 years (water years 1933-58, 1970-77), 270 ft³/s (7.646 m³/s), 19.00 in/yr (483 mm/yr), adjusted for storage and diversion since October 1951.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) Aug. 9, 1942, gage height, 17.57 ft (5.355 m), from rating curve extended above 5,000 ft³/s (142 m³/s) on basis of velocity-area studies; maximum gage height, 18.92 ft (5.767 m) June 22, 1972; minimum discharge, 18 ft³/s (0.51 m³/s) July 30, 31, Aug. 2, 1954; minimum daily, 22 ft³/s (0.62 m³/s) Aug. 2, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of 1884 and 1918 reached stages of 24.3 ft (7.41 m) and 16.5 ft (5.03 m), respectively, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,950 ft³/s (83.5 m³/s) Apr. 5, gage height, 7.34 ft (2.237 m); minimum, 19 ft³/s (0.54 m³/s) Sept. 21; minimum daily, 40 ft³/s (1.13 m³/s) Aug. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	428	140	90	70	148	164	155	201	160	40	121
2	120	263	130	90	75	126	337	147	665	134	40	144
3	270	223	120	95	80	111	513	147	198	114	47	100
4	240	214	120	100	90	170	332	140	171	102	87	81
5	130	205	120	110	100	453	2230	153	142	92	89	67
6	120	189	130	110	100	288	1100	199	124	100	58	60
7	107	181	721	100	80	153	484	265	123	296	50	83
8	101	179	598	90	75	142	333	230	102	219	54	61
9	1180	169	234	85	80	129	329	177	125	153	44	65
10	746	166	173	145	100	122	300	146	406	122	53	70
11	276	163	154	250	315	119	283	130	223	102	115	65
12	186	159	147	200	500	115	274	128	130	86	87	63
13	152	155	145	150	350	619	261	138	101	82	68	56
14	137	151	125	110	255	1010	231	132	79	119	65	53
15	122	149	125	100	195	388	211	119	93	115	102	57
16	114	145	123	90	145	241	205	116	91	88	92	62
17	115	156	124	85	130	187	200	123	92	73	75	65
18	117	161	123	80	110	192	192	134	116	69	174	60
19	108	141	117	90	93	208	187	147	100	63	117	55
20	364	134	122	100	97	177	179	145	88	60	79	121
21	1250	129	150	100	90	174	173	140	84	61	61	68
22	431	136	115	90	70	1020	168	135	84	54	111	50
23	254	132	110	85	74	1520	166	129	80	57	180	52
24	212	128	115	80	202	484	169	127	75	67	109	56
25	266	129	115	80	991	244	246	125	78	56	110	71
26	427	128	110	90	324	242	246	124	81	64	92	63
27	307	128	115	90	190	220	201	118	91	43	75	51
28	229	130	110	85	172	212	178	108	98	42	67	52
29	199	160	100	90	---	209	186	93	296	41	66	48
30	188	170	95	80	---	197	168	83	232	44	63	46
31	487	---	90	65	---	185	---	75	---	45	64	---
TOTAL	9105	5101	5016	3205	5153	9805	10246	4328	4569	2923	2534	2066
MEAN	294	170	162	103	184	316	342	140	152	94.3	81.7	68.9
MAX	1250	428	721	250	991	1520	2230	265	665	296	180	144
MIN	101	128	90	65	70	111	164	75	75	41	40	46
(≠)	+55.3	+39.9	+46.0	+52.0	+57.8	+47.8	+44.7	+46.5	+51.1	+39.9	+54.7	+46.2
MEAN*	349	210	208	155	242	364	387	187	203	134	136	115
CFSM*	1.81	1.09	1.08	.80	1.25	1.89	2.01	.97	1.05	.69	.70	.60
IN.*	2.08	1.21	1.24	.93	1.30	2.17	2.23	1.11	1.18	.80	.82	.67

CAL YR 1976 TOTAL 85100 MEAN 233 MAX 3480 MIN 40 MEAN* 279 CFSM* 1.45 IN* 19.73
WTR YR 1977 TOTAL 64051 MEAN 175 MAX 2230 MIN 40 MEAN* 225 CFSM* 1.17 IN* 15.75

≠ Diversion above station and diversion from and change in contents in Chester Octoraro Reservoir, equivalent in cubic feet per second; furnished by Octoraro Water Co. and Chester Municipal Authority, respectively.

* Adjusted for diversion and change in reservoir contents.

01578500 OCTORARO CREEK NEAR RISING SUN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	AIR TEMPER- ATURE (DEG C)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)
OCT							
06...	1225	123	--	7.2	24.5	18.0	--
NOV							
10...	1045	165	195	6.9	8.5	5.5	5.5
DEC							
13...	1130	154	195	--	-2.0	3.0	--
FEB							
17...	1250	128	148	7.6	-1.0	3.5	12.3
APR							
04...	1520	295	160	7.2	6.5	7.0	11.5
MAY							
13...	1250	143	152	9.0	25.5	18.0	9.8
JUN							
27...	1635	94	170	9.3	27.5	26.0	8.9
AUG							
12...	1100	93	300	7.5	26.0	24.5	8.3
SEP							
14...	1310	52	215	8.9	23.0	19.0	8.7

01580000 DEER CREEK AT ROCKS, MD

LOCATION.--Lat 39°37'49", long 76°24'13", Harford County, Hydrologic Unit 02050306, on right bank 0.3 mi (0.5 km) upstream from bridge on Cherry Hill Road, 0.8 mi (1.3 km) southeast of Rocks, 1.2 mi (1.9 km) upstream from Stirrup Run, and 23.5 mi (37.8 km) upstream from mouth.

DRAINAGE AREA.--94.4 mi^2 (244.5 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1926 to current year. Monthly discharge only for November and December 1926, published in WSP 1302.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1927-36 (maximum and minimum only 1927-29, maximum only 1930-32, 1936).

GAGE.--Water-stage recorder. Concrete control since Sept. 7, 1938. Datum of gage is 250.40 ft (76.322 m) above mean sea level (city of Baltimore bench mark).

REMARKS.--Records excellent. Some regulation at low flow by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years, 123 ft^3/s (3.483 m^3/s), 17.69 in/yr (449 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s (385 m^3/s) Aug. 23, 1933, gage height, 17.7 ft (5.39 m), from floodmarks, from rating curve extended above 3,000 ft^3/s (85.0 m^3/s) on basis of slope-area measurements at gage heights 13.3 ft (4.05 m) and 17.7 ft (5.39 m); minimum, 8 ft^3/s (0.23 m^3/s) Dec. 16, 1930, Jan. 26, 1939, result of regulation; minimum daily, 8.6 ft^3/s (0.24 m^3/s) Sept. 11, 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1888, that of Aug. 23, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,900 ft^3/s (53 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	2200	1930	54.7	5.98	1.823	Apr. 5	0430	*2380	67.4	6.77	2.063

Minimum discharge, 38 ft^3/s (1.08 m^3/s) Sept. 15, gage height, 1.98 ft (0.604 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	129	69	59	68	84	104	115	134	70	47	141
2	114	108	70	70	72	76	370	115	287	65	46	59
3	186	103	70	68	76	71	259	115	90	61	57	52
4	128	100	70	70	80	320	194	110	78	59	50	48
5	93	94	70	67	82	237	1240	129	75	58	45	46
6	81	91	70	64	69	138	402	180	83	111	43	46
7	75	88	280	70	68	114	286	158	85	187	41	44
8	76	87	142	65	68	100	249	121	75	93	42	43
9	254	84	116	73	70	91	216	112	101	68	52	43
10	156	84	89	94	118	87	199	107	106	64	52	44
11	105	82	85	82	395	83	194	104	81	61	68	41
12	91	81	85	74	341	81	187	99	74	62	49	39
13	85	79	82	68	250	505	175	96	72	61	57	39
14	79	79	82	78	150	513	168	92	71	56	68	39
15	75	79	85	84	105	198	159	88	81	53	68	38
16	72	77	77	76	85	154	153	87	75	52	55	40
17	72	75	76	70	70	129	149	86	75	55	98	44
18	71	77	72	75	65	141	138	84	133	58	91	43
19	67	75	71	75	70	130	138	83	90	52	56	40
20	235	74	74	80	62	120	134	82	71	61	51	73
21	365	73	75	75	65	126	129	81	67	54	48	44
22	134	73	70	70	65	641	125	78	63	50	91	42
23	109	72	70	70	65	308	123	76	59	47	57	43
24	105	70	70	70	297	201	133	77	59	47	51	44
25	134	71	70	85	305	164	170	78	59	50	52	63
26	189	71	75	80	110	147	167	79	59	61	46	53
27	125	72	75	75	95	135	133	73	56	50	45	48
28	110	71	74	75	105	139	125	71	321	47	43	51
29	102	93	74	72	---	136	136	70	218	46	42	44
30	97	83	70	70	---	122	120	69	82	49	41	41
31	177	---	70	70	---	114	---	72	---	52	187	---
TOTAL	3897	2495	2628	2274	3471	5605	6475	2987	2980	1960	1839	1475
MEAN	126	83.2	84.8	73.4	124	181	216	96.4	99.3	63.2	59.3	49.2
MAX	365	129	280	94	395	641	1240	180	321	187	187	141
MIN	67	70	69	59	62	71	104	69	56	46	41	38
CFSM	1.34	.88	.90	.78	1.31	1.92	2.29	1.02	1.05	.67	.63	.52
IN.	1.54	.98	1.04	.90	1.37	2.21	2.55	1.18	1.17	.77	.72	.58

CAL YR 1976 TOTAL 48174 MEAN 132 MAX 1540 MIN 40 CFSM 1.40 IN 18.98
WTR YR 1977 TOTAL 38086 MEAN 104 MAX 1240 MIN 38 CFSM 1.10 IN 15.01

01580000 DEER CREEK AT ROCKS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)
OCT									
07...	1120	74	100	8.3	18.0	16.0	0	--	--
NOV									
29...	1130	95	98	7.9	1.0	6.0	71	--	--
DEC									
29...	1205	74	95	7.5	.0	1.0	2	--	--
FEB									
11...	1000	241	120	6.8	6.0	.5	0	--	--
MAR									
22...	1215	425	100	7.5	--	7.0	--	100	32
24...	1135	208	--	--	7.0	6.5	--	--	--
MAY									
04...	1130	106	110	7.1	15.0	13.0	51	--	--
JUN									
15...	1310	86	--	--	19.0	18.0	--	--	--
JUL									
21...	1400	53	100	8.6	31.0	25.0	1	--	--
SEP									
12...	1030	39	85	8.5	--	15.5	--	5	32

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT									
07...	--	--	--	--	--	--	--	--	--
NOV									
29...	--	--	--	--	--	--	--	--	--
DEC									
29...	--	--	--	--	--	--	--	--	--
FEB									
11...	--	--	--	--	--	--	--	--	--
MAR									
22...	14	7.4	3.2	5.3	2.6	21	6.4	8.3	.0
24...	--	--	--	--	--	--	--	--	--
MAY									
04...	--	--	--	--	--	--	--	--	--
JUN									
15...	--	--	--	--	--	--	--	--	--
JUL									
21...	--	--	--	--	--	--	--	--	--
SEP									
12...	13	7.8	3.1	5.2	1.7	24	4.0	8.2	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT									
07...	--	--	--	--	--	--	--	--	--
NOV									
29...	--	--	--	--	--	--	--	--	--
DEC									
29...	--	--	--	--	--	--	--	--	--
FEB									
11...	--	--	--	--	--	--	--	--	--
MAR									
22...	6.7	95	50	2.0	.30	19000	30	470	60
24...	--	--	--	--	--	--	--	--	--
MAY									
04...	--	--	--	--	--	--	--	--	--
JUN									
15...	--	--	--	--	--	--	--	--	--
JUL									
21...	--	--	--	--	--	--	--	--	--
SEP									
12...	5.6	81	48	2.1	.02	160	90	20	20

01580200 DEER CREEK NEAR KALMIA, MD

LOCATION.--Lat 39°37'16", long 76°17'57", Harford County, Hydrologic Unit 02050306, on left bank 50 [illegible] (15 m) upstream from bridge on U.S. Highway 1, 1 mi (1.6 km) north of Kalmia, 6.5 mi (10.5 km) northeast of Bel Air, and 12.5 mi (20.1 km) upstream from mouth.

DRAINAGE AREA.--125 mi² (324 km²).

PERIOD OF RECORD.--July 1967 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 145 ft (44 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years, 192 ft³/s (5.437 m³/s), 20.86 in/yr (530 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s (476 m³/s) June 22, 1972, gage height, 16.08 ft (4.901 m); minimum, 29 ft³/s (0.82 m³/s) Dec. 7, 1969, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,890 ft³/s (81.8 m³/s) Apr. 5, gage height, 7.40 ft (2.256 m), no other peak above base of 2,500 ft³/s (70 m³/s); minimum, 47 ft³/s (1.33 m³/s) Sept. 14, 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	190	94	80	90	118	141	153	169	90	60	250
2	161	155	95	90	95	109	433	146	429	84	58	74
3	253	145	95	90	100	101	388	145	125	78	73	63
4	186	140	95	90	105	284	256	139	104	76	68	59
5	133	133	95	90	110	376	1620	157	100	75	58	57
6	116	128	95	85	92	187	526	207	105	105	54	78
7	107	124	400	90	90	156	359	219	112	265	53	62
8	102	121	216	85	90	136	310	159	99	155	54	54
9	309	116	146	90	92	125	270	143	120	91	77	53
10	248	115	125	130	160	119	250	139	143	83	61	56
11	149	113	115	110	500	114	239	131	107	80	83	52
12	129	111	113	100	550	112	235	126	96	79	65	49
13	120	108	111	90	350	409	220	125	93	80	67	49
14	114	107	106	100	200	795	212	120	91	75	78	48
15	107	107	115	110	140	259	200	116	107	69	89	47
16	102	105	105	100	110	203	194	115	97	66	69	48
17	102	103	100	95	95	172	189	114	97	67	130	54
18	102	104	99	100	90	182	184	112	170	87	140	54
19	95	102	97	100	90	182	183	109	113	69	73	50
20	403	101	100	110	85	157	177	107	93	71	65	78
21	583	100	100	100	85	169	171	105	88	71	61	57
22	195	100	95	95	85	737	168	102	82	64	96	52
23	155	99	95	95	85	451	165	102	80	61	77	53
24	145	94	95	95	260	261	174	102	77	58	64	54
25	184	97	95	110	479	215	229	103	77	60	65	61
26	254	97	100	105	158	194	201	104	79	75	59	71
27	176	99	100	100	130	178	165	98	75	64	56	58
28	153	98	95	100	140	180	153	94	346	59	54	58
29	140	120	95	100	---	183	162	91	428	57	53	56
30	134	115	90	95	---	164	159	92	114	61	54	50
31	282	---	90	95	---	154	---	97	---	64	67	---
TOTAL	5630	3447	3567	3025	4656	7182	8333	3872	4016	2539	2181	1[illegible]
MEAN	182	115	115	97.6	166	232	278	125	134	81.9	70.4	63.5
MAX	583	190	400	130	550	795	1620	219	429	265	140	250
MIN	95	94	90	80	85	101	141	91	75	57	53	47
CFSM	1.46	.92	.92	.78	1.33	1.86	2.22	1.00	1.07	.66	.56	.51
IN.	1.68	1.03	1.06	.90	1.39	2.14	2.48	1.15	1.20	.76	.65	.57

CAL YR 1976 TOTAL 66176 MEAN 181 MAX 1770 MIN 53 CFSM 1.45 IN 19.69
WTR YR 1977 TOTAL 50353 MEAN 138 MAX 1620 MIN 47 CFSM 1.10 IN 14.98

01581700 WINTERS RUN NEAR BENSON, MD

LOCATION.--Lat 39°31'12", long 76°22'24", Harford County, Hydrologic Unit 02060003, on left bank 30 ft (9 m) downstream from bridge on U.S. Highway 1, 0.1 mi (0.2 km) upstream from Heavenly Waters, 1.2 mi (1.9 km) northeast of Benson, 1.8 mi (2.9 km) southwest of Bel Air, and 10.5 mi (16.9 km) upstream from mouth.

DRAINAGE AREA.--34.8 mi^2 (90.1 km^2).

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 195 ft (59 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years, 54.2 ft^3/s (1.535 m^3/s), 21.15 in/yr (537 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,600 ft^3/s (215 m^3/s) June 22, 1972, gage height, 11.60 ft (3.536 m); minimum, 7.2 ft^3/s (0.20 m^3/s) July 5, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 20	2045	1050	29.7	4.86	1.481	June 28	1930	*1760	49.8	6.04	1.841

Minimum discharge, 9.3 ft^3/s (0.26 m^3/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	63	33	28	26	34	36	38	41	30	18	13
2	182	52	33	30	26	30	179	39	68	28	16	13
3	181	49	33	30	26	28	94	37	28	25	17	12
4	68	47	32	32	28	105	114	37	25	24	17	12
5	48	44	32	30	30	77	375	46	24	24	16	13
6	41	43	32	30	26	47	106	54	27	50	15	49
7	36	42	174	32	26	39	77	49	27	98	14	24
8	35	40	60	30	25	34	67	39	25	41	13	15
9	142	38	46	30	25	32	60	36	36	29	29	14
10	58	38	38	40	60	31	58	35	30	27	17	15
11	43	38	38	32	172	31	56	34	27	26	21	12
12	38	37	39	32	105	29	53	34	25	27	18	12
13	36	37	36	30	92	217	52	33	25	27	20	12
14	34	36	33	32	55	115	53	31	25	24	29	12
15	32	36	35	34	41	60	50	30	28	22	22	9.8
16	31	36	34	32	32	47	49	30	25	21	17	11
17	33	35	33	28	30	41	46	30	33	26	68	15
18	31	36	31	30	28	62	43	30	49	37	32	13
19	30	35	31	30	29	48	43	29	27	22	20	12
20	261	34	35	32	28	46	42	29	25	23	17	14
21	159	33	36	30	27	46	41	28	24	20	17	12
22	58	33	32	30	26	275	40	27	22	19	22	12
23	48	32	32	30	28	94	40	27	21	17	16	12
24	50	31	30	30	145	60	52	27	20	17	18	12
25	62	32	30	34	86	50	70	29	21	20	18	15
26	93	32	32	32	45	46	52	28	21	21	16	14
27	52	33	31	30	41	44	43	26	19	17	14	13
28	47	32	30	30	39	48	42	24	254	16	14	14
29	44	49	30	30	---	46	46	24	111	16	14	11
30	42	36	34	28	---	42	39	23	36	19	13	12
31	167	---	31	28	---	38	---	24	---	18	13	---
TOTAL	2240	1159	1206	956	1347	1942	2118	1007	1169	831	611	429.8
MEAN	72.3	38.6	38.9	30.8	48.1	62.6	70.6	32.5	39.0	26.8	19.7	14.3
MAX	261	63	174	40	172	275	375	54	254	98	68	49
MIN	30	31	30	28	25	28	36	23	19	16	13	9.8
CFSM	2.08	1.11	1.12	.89	1.38	1.80	2.03	.93	1.12	.77	.57	.41
IN.	2.39	1.24	1.29	1.02	1.44	2.08	2.26	1.08	1.25	.89	.65	.46

CAL YR 1976 TOTAL 20307.0 MEAN 55.5 MAX 1170 MIN 15 CFSM 1.60 IN 21.71
WTR YR 1977 TOTAL 15015.8 MEAN 41.1 MAX 375 MIN 9.8 CFSM 1.18 IN 16.05

01582000 LITTLE FALLS AT BLUE MOUNT, MD

LOCATION.--Lat 39°36'16", long 76°37'16", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of Pennsylvania Railroad bridge, 0.2 mi (0.3 km) north of Blue Mount, 0.6 mi (1.0 km) upstream from mouth, 0.9 mi (1.4 km) downstream from First Mine Branch, and 1.2 mi (1.9 km) south of White Hall.

DRAINAGE AREA.--52.9 mi² (137.0 km²).

PERIOD OF RECORD.--June 1944 to current year.

REVISED RECORDS.--WSP 111: 1944(M), 1945-47(P).

GAGE.--Water-stage recorder. Altitude of gage is 305 ft (93 m), from topographic map.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by mill above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 67.9 ft³/s (1.923 m³/s), 17.43 in/yr (443 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,280 ft³/s (234 m³/s) June 22, 1972, gage height, 18.54 ft (5.651 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.9 ft³/s (0.054 m³/s) Aug. 29, 1966; minimum daily, 4.5 ft³/s (0.13 m³/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft³/s (38.5 m³/s) Apr. 5, gage height, 4.83 ft (1.472 m), no other peak above base of 1,000 ft³/s (28 m³/s); minimum, 13 ft³/s (0.37 m³/s) Feb. 22, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	66	46	40	28	52	56	61	114	37	27	26
2	104	59	44	36	28	47	210	61	106	35	26	24
3	128	57	53	40	30	45	119	60	49	33	26	22
4	71	55	52	42	32	160	122	62	44	33	26	22
5	53	53	44	38	34	106	568	69	43	32	23	22
6	47	51	44	36	30	76	192	108	50	53	22	22
7	44	50	169	38	28	66	147	83	50	59	23	24
8	52	49	66	40	28	60	130	67	45	43	23	22
9	236	48	59	36	28	56	114	61	60	37	30	22
10	86	48	50	46	70	53	106	59	55	35	34	24
11	63	47	46	40	200	50	100	57	47	35	36	22
12	55	47	47	38	110	50	95	55	44	35	27	20
13	51	46	44	34	100	272	90	53	43	33	34	20
14	47	45	46	34	70	169	87	51	42	31	41	19
15	45	46	52	40	50	94	82	49	52	29	34	19
16	43	45	42	38	46	78	80	49	46	28	29	22
17	44	44	41	34	40	67	77	48	60	29	63	26
18	43	45	39	32	38	77	75	47	90	36	40	23
19	41	44	39	32	50	67	74	46	50	30	30	22
20	125	43	41	36	46	67	72	45	46	51	28	36
21	129	43	42	32	44	66	70	44	44	33	27	24
22	66	42	42	30	40	290	69	43	44	36	64	23
23	57	41	40	30	40	144	67	42	42	29	30	24
24	60	41	38	30	203	106	72	43	40	28	29	25
25	70	42	38	36	106	90	82	45	40	29	29	33
26	93	42	40	34	61	81	79	43	44	32	26	28
27	64	42	40	32	60	75	69	40	38	27	25	27
28	58	42	40	30	63	79	68	39	50	26	25	30
29	55	56	38	30	---	71	72	38	80	26	23	25
30	54	44	40	30	---	64	64	38	39	32	22	24
31	98	---	40	30	---	59	---	40	---	29	26	---
TOTAL	2263	1423	1502	1094	1703	2837	3308	1646	1597	1061	948	722
MEAN	73.0	47.4	48.5	35.3	60.8	91.5	110	53.1	53.2	34.2	30.6	24.1
MAX	236	66	169	46	203	290	568	108	114	59	64	36
MIN	41	41	38	30	28	45	56	38	38	26	22	19
CFSM	1.38	.90	.92	.67	1.15	1.73	2.08	1.00	1.01	.65	.58	.46
IN.	1.59	1.00	1.06	.77	1.20	1.99	2.33	1.16	1.12	.75	.67	.51

CAL YR 1976 TOTAL 27443 MEAN 75.0 MAX 888 MIN 23 CFSM 1.42 IN 19.30
WTR YR 1977 TOTAL 20104 MEAN 55.1 MAX 568 MIN 19 CFSM 1.04 IN 14.14

01583000 SLADE RUN NEAR GLYNDON, MD

LOCATION.--Lat 39°29'40", long 76°47'45", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of bridge on Longnecker Road, 1.1 mi (1.8 km) upstream from mouth, 1.6 mi (2.6 km) northeast of Glyndon, and 2.6 mi (4.2 km) northeast of Reisterstown.

DRAINAGE AREA.--2.09 mi² (5.41 km²).

PERIOD OF RECORD.--September 1947 to current year.

REVISED RECORD.--WSP 1502: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 425.25 ft (129.616 m) above mean sea level.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 2.33 ft³/s (0.066 m³/s), 15.14 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 515 ft³/s (14.6 m³/s) June 22, 1972, gage height, 4.80 ft (1.463 m), from rating curve extended above 80 ft³/s (2.27 m³/s) on basis of slope-area measurement at gage height 3.96 ft (1.207 m); no flow many days in August and September 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49 ft³/s (1.39 m³/s) Oct. 3, Mar. 22, gage height, 3.08 ft (0.939 m), no peak above base of 90 ft³/s (2.5 m³/s); minimum, 0.35 ft³/s (0.010 m³/s) Sept. 11, 12, 13, 14, 15, gage height, 1.96 ft (0.597 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.0	1.7	1.4	1.0	1.8	1.9	2.3	1.8	.97	.57	.54
2	6.5	2.6	1.8	1.3	1.0	1.7	.70	2.3	2.0	.87	.54	.51
3	12	2.5	1.9	1.3	1.0	1.6	4.1	2.2	1.5	.81	.63	.49
4	3.6	2.4	1.6	1.5	1.1	3.5	6.8	2.3	1.3	.79	.56	.48
5	2.3	2.2	1.6	1.4	1.1	2.7	13	2.4	1.4	.78	.54	.48
6	2.1	2.2	1.7	1.4	1.0	2.2	5.4	2.9	1.7	.75	.54	.54
7	2.0	2.2	6.3	1.4	.95	2.0	4.3	2.6	1.5	1.1	.49	.60
8	2.6	2.1	3.0	1.4	.95	1.8	3.9	2.3	1.3	.92	.82	.52
9	10	2.0	2.3	1.3	.95	1.8	3.7	2.1	2.1	.83	.89	.50
10	3.8	2.0	2.1	1.3	1.0	1.7	3.6	2.1	1.6	.78	.71	.56
11	2.8	2.0	2.1	1.2	2.9	1.7	3.5	2.0	1.4	.98	.69	.42
12	2.4	2.0	2.2	1.2	2.0	1.7	3.3	1.9	1.3	.99	.72	.40
13	2.2	1.9	2.0	1.1	1.9	5.5	3.1	1.9	1.2	.88	.70	.39
14	2.0	1.9	1.9	1.2	1.6	4.0	3.1	1.8	1.3	.73	1.4	.38
15	1.9	1.9	1.9	1.2	1.4	2.7	2.9	1.8	1.5	.67	.86	.39
16	1.8	1.8	1.9	1.1	1.3	2.3	2.8	1.4	1.3	.64	.72	.46
17	1.9	1.8	1.9	1.1	1.2	2.0	2.7	1.6	3.2	.89	3.2	.56
18	1.8	1.8	1.8	1.1	1.2	2.6	2.6	1.6	2.2	1.0	1.3	.45
19	1.8	2.1	1.8	1.1	1.2	2.1	2.6	1.6	1.3	.70	.88	.75
20	4.8	1.8	2.0	1.0	1.2	2.4	2.5	1.6	1.3	1.3	.77	.94
21	4.2	1.8	2.5	1.0	1.4	2.4	2.5	1.6	1.2	.75	.76	.53
22	2.7	1.7	1.9	1.0	1.2	11	2.5	1.5	1.1	.64	.74	.53
23	2.3	1.7	1.8	1.0	1.3	4.4	2.5	1.5	1.0	.59	.70	.55
24	2.7	1.7	2.3	1.1	3.0	3.1	2.9	1.5	.99	.58	.76	.55
25	3.2	1.7	1.7	1.1	2.0	2.6	3.1	1.7	1.1	.82	.73	.57
26	4.4	1.7	1.9	1.1	1.6	2.3	2.7	1.6	1.0	.77	.67	.60
27	3.0	1.8	1.8	1.1	1.8	2.2	2.5	1.5	.91	.60	.63	.65
28	2.6	1.7	1.7	1.0	2.0	2.6	2.6	1.4	2.3	.57	.61	.70
29	2.4	2.5	1.7	1.0	---	2.3	2.6	1.3	1.7	.58	.57	.60
30	2.3	1.9	1.7	1.0	---	2.2	2.3	1.3	1.0	.68	.54	.50
31	4.7	---	1.5	1.0	---	2.0	---	1.4	---	.60	.56	---
TOTAL	105.2	60.4	64.0	36.4	40.25	84.9	102.70	57.0	44.50	24.56	24.80	16.14
MEAN	3.39	2.01	2.06	1.17	1.44	2.74	3.42	1.84	1.48	.79	.80	.54
MAX	12	3.0	6.3	1.5	3.0	11	13	2.9	3.2	1.3	3.2	.94
MIN	1.8	1.7	1.5	1.0	.95	1.6	.70	1.3	.91	.57	.49	.38
CFSM	1.62	.96	.99	.56	.69	1.31	1.64	.88	.71	.38	.38	.26
IN.	1.87	1.07	1.14	.65	.72	1.51	1.83	1.01	.79	.44	.44	.29

CAL YR 1976 TOTAL 998.90 MEAN 2.73 MAX 22 MIN .65 CFSM 1.31 IN 17.77
WTR YR 1977 TOTAL 660.85 MEAN 1.81 MAX 13 MIN .38 CFSM .87 IN 11.76

01583500 WESTERN RUN AT WESTERN RUN, MD

LOCATION.--Lat 39°30'38", long 76°40'37", Baltimore County, Hydrologic Unit 02060003, on right bank 100 ft (30 m) downstream from bridge on Western Run Road, 0.3 mi (0.5 km) southeast of Western Run, 2.5 mi (4.0 km) northwest of Cockeysville, 3.2 mi (5.1 km) upstream from Beaverdam Run, and 5.0 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--59.8 mi² (154.9 km²).

PERIOD OF RECORD.--September 1944 to current year.

REVISED RECORDS.--WSP 1502: 1945-46, 1948(M).

GAGE.--Water-stage recorder. Datum of gage is 262.78 ft (80.095 m) above mean sea level (Baltimore County bench mark).

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 67.7 ft³/s (1.917 m³/s), 15.37 in/yr (390 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft³/s (1,080 m³/s) June 22, 1972, gage height, 26.0 ft (7.92 m), from floodmarks, from rating curve extended above 3,200 ft³/s (90.6 m³/s) on basis of slope-area measurement and contracted-opening measurement at gage height 26.0 ft (7.92 m); minimum, 2.4 ft³/s (0.068 m³/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1545	1090	30.9	4.10	1.250	Apr. 5	0300	*1390	39.4	4.65	1.417
Mar. 22	1615	1110	31.4	4.14	1.262						

Minimum discharge, 10 ft³/s (0.28 m³/s) Dec. 21, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	75	49	46	36	52	59	60	41	33	20	21
2	146	66	44	44	34	48	224	60	57	31	20	19
3	231	63	48	42	36	46	124	60	40	28	20	18
4	86	61	49	40	38	94	115	59	38	27	20	18
5	62	57	52	46	42	85	586	62	37	28	18	18
6	54	55	55	46	40	65	173	78	41	27	19	18
7	49	54	192	42	38	60	124	71	41	34	17	20
8	58	52	79	42	38	55	108	61	37	35	18	19
9	306	51	62	40	38	52	96	56	49	28	27	18
10	101	51	54	46	60	50	91	55	45	28	28	20
11	71	50	53	44	200	48	86	54	40	28	48	17
12	62	49	53	42	110	47	81	52	37	31	25	16
13	57	48	50	40	80	209	76	51	38	29	28	16
14	53	48	47	40	56	159	74	48	38	26	34	15
15	49	48	47	46	48	86	71	47	42	24	30	15
16	48	47	47	44	44	71	69	46	39	23	25	17
17	48	46	47	42	40	64	67	46	48	22	55	20
18	47	46	45	40	40	71	66	45	82	36	40	18
19	45	46	44	38	42	64	66	44	42	24	27	17
20	98	45	46	42	42	66	65	44	39	32	24	29
21	144	45	40	38	39	67	64	43	39	25	23	20
22	69	44	48	36	40	324	63	42	34	22	23	19
23	59	43	44	36	42	136	62	42	33	20	22	20
24	61	43	44	36	133	93	67	42	33	20	23	20
25	76	44	44	40	103	79	79	44	33	22	24	20
26	110	44	43	38	63	72	70	43	34	27	21	22
27	72	44	44	36	59	68	64	40	31	21	21	21
28	65	44	41	34	59	72	64	39	50	20	20	21
29	61	57	41	34	---	69	67	37	72	20	20	19
30	58	47	46	34	---	65	61	38	35	23	19	18
31	114	---	46	36	---	61	---	39	---	22	21	---
TOTAL	2645	1513	1644	1250	1640	2598	3082	1548	1265	816	780	569
MEAN	85.3	50.4	53.0	40.3	58.6	83.8	103	49.9	42.2	26.3	25.2	19.0
MAX	306	75	192	46	200	324	586	78	82	36	55	29
MIN	45	43	40	34	34	46	59	37	31	20	17	15
CFSM	1.43	.84	.89	.67	.98	1.40	1.72	.83	.71	.44	.42	.32
IN.	1.65	.94	1.02	.78	1.02	1.62	1.92	.96	.79	.51	.49	.35

CAL YR 1976 TOTAL 28465 MEAN 77.8 MAX 804 MIN 24 CFSM 1.30 IN 17.71
WTR YR 1977 TOTAL 19350 MEAN 53.0 MAX 586 MIN 15 CFSM .89 IN 12.04

01584050 LONG GREEN CREEK AT GLEN ARM, MD

LOCATION.--Lat 39°27'17", long 76°28'45", Baltimore County, Hydrologic Unit 02060003, on right bank 0.5 mi (0.8 km) downstream from bridge on Glen Arm Road, 0.6 mi (1.0 km) upstream from State Highway 147 (Harford Road), 0.8 mi (1.3 km) east of Glen Arm, and 1.6 mi (2.6 km) upstream from mouth.

DRAINAGE AREA.--9.40 mi^2 (24.3 km^2).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 230 ft (70 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,690 ft^3/s (47.9 m^3/s) Sept. 16, 1976, gage height, 5.59 ft (1.704 m); minimum, 1.0 ft^3/s (0.028 m^3/s) Jan. 29, 1977, gage height, 0.79 ft (0.241 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft^3/s (8.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 20	2015	319	9.03	3.56	1.085
Mar. 13	1930	319	9.03	3.56	1.085
Apr. 4	2230	312	8.84	3.54	1.079
June 28	1915	*431	12.2	3.88	1.183

Minimum discharge, 1.0 ft^3/s (0.028 m^3/s) Jan. 29, gage height, 0.79 ft (0.241 m), result of freezeup; minimum daily, 2.4 ft^3/s (0.068 m^3/s) Sept. 14, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	6.9	6.1	5.0	7.0	8.6	9.1	8.8	6.5	3.5	3.9
2	40	11	7.0	5.8	5.1	6.6	39	9.1	9.0	6.0	3.2	3.0
3	40	11	6.5	5.9	5.0	6.5	16	8.9	6.0	5.5	3.6	2.9
4	15	10	6.5	6.0	5.0	13	40	9.1	5.6	5.0	3.5	2.8
5	11	9.6	6.4	6.1	5.0	10	78	9.2	5.5	5.0	3.1	2.8
6	8.5	9.4	6.6	5.9	5.0	8.5	21	11	6.0	11	3.2	8.0
7	8.0	9.1	33	6.2	4.8	7.7	16	9.9	6.0	24	3.1	5.8
8	8.1	8.8	11	6.0	4.8	7.2	14	8.8	5.5	8.0	3.1	2.9
9	21	8.5	8.7	6.0	4.8	7.0	13	8.5	8.9	6.5	3.6	2.8
10	11	8.5	8.5	7.9	12	6.7	13	7.8	6.9	6.0	3.4	2.9
11	9.2	8.5	8.3	7.0	29	6.6	12	7.8	5.9	5.5	4.8	2.6
12	8.7	8.5	8.1	6.0	14	6.4	12	7.6	5.4	6.0	4.8	2.5
13	8.4	8.2	7.7	5.9	11	59	11	7.4	5.2	6.0	4.4	2.5
14	7.9	7.8	7.3	6.1	7.9	19	11	7.3	5.2	5.0	5.7	2.4
15	7.5	7.8	7.4	6.4	7.0	12	11	7.0	6.6	4.8	4.9	2.5
16	7.2	7.8	7.5	6.2	6.0	10	10	7.0	5.7	4.6	4.2	2.5
17	7.4	7.5	7.5	6.0	5.5	9.2	10	7.0	6.6	6.0	14	2.9
18	7.3	7.5	7.2	5.8	5.4	12	9.8	6.9	7.2	8.0	5.0	2.6
19	7.0	7.5	7.0	5.8	5.8	9.6	9.9	6.7	5.3	4.8	3.6	2.5
20	56	7.5	7.5	5.9	5.6	10	9.8	6.7	5.0	5.0	3.4	2.9
21	23	7.5	8.2	5.5	5.3	9.7	9.6	6.5	5.1	4.4	3.2	2.5
22	12	7.5	6.8	5.2	5.1	64	9.5	6.2	4.5	4.2	3.7	2.5
23	10	7.2	6.9	5.4	5.6	17	9.3	6.3	4.5	3.8	3.2	2.5
24	10	7.0	6.5	5.4	26	13	22	6.5	4.4	3.8	3.3	2.5
25	11	7.0	6.4	5.3	11	11	14	7.0	4.3	4.4	3.5	2.6
26	17	7.0	6.9	5.3	8.0	10	12	6.8	4.3	4.6	3.1	2.6
27	11	7.2	6.8	5.3	8.0	10	10	6.2	4.1	3.5	3.0	2.6
28	9.6	7.2	6.7	5.3	7.9	11	10	5.9	60	3.3	3.0	2.6
29	9.4	9.4	6.7	5.3	---	10	10	5.7	15	3.3	3.0	2.6
30	9.1	7.3	7.0	5.2	---	9.7	9.5	5.6	7.5	3.8	2.8	2.4
31	41	---	6.5	5.2	---	9.1	---	5.8	---	3.5	3.7	---
TOTAL	467.3	251.8	252.0	181.4	230.6	408.5	481.0	231.3	240.0	181.8	123.6	89.1
MEAN	15.1	8.39	8.13	5.85	8.24	13.2	16.0	7.46	8.00	5.86	3.99	2.97
MAX	56	13	33	7.9	29	64	78	11	60	24	14	8.0
MIN	7.0	7.0	6.4	5.2	4.8	6.4	8.6	5.6	4.1	3.3	2.8	2.4
CFSM	1.61	.89	.87	.62	.88	1.40	1.70	.79	.85	.62	.42	.32
IN.	1.85	1.00	1.00	.72	.91	1.62	1.90	.92	.95	.72	.49	.35

CAL YR 1976 TOTAL 4284.2 MEAN 11.7 MAX 244 MIN 3.2 CFSM 1.25 IN 16.95
WTR YR 1977 TOTAL 3138.4 MEAN 8.60 MAX 78 MIN 2.4 CFSM .92 IN 12.42

01585100 WHITEMARSH RUN AT WHITE MARSH, MD

LOCATION.--Lat 39°22'15", long 76°26'46", Baltimore County, Hydrologic Unit 02060003, on left bank at upstream side of bridge on State Highway 7, 1 mi (1.6 km) southwest of White Marsh, and 3 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--7.61 mi² (19.71 km²).

PERIOD OF RECORD.--February 1959 to current year.

REVISED RECORDS.--WDR MD-DE-73-1: 1960(M), 1967-68, 1969(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 38.96 ft (11.875 m) above mean sea level.

REMARKS.--Records good. Low flow affected by operations of sand and gravel plant in vicinity of gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 10.8 ft³/s (0.306 m³/s), 19.27 in/yr (489 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) Aug. 1, 1971, gage height, 14.05 ft (4.282 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of computation of flow-through culvert at gage height 10.04 ft (3.060 m) and computation of flow-through-culvert and over road at gage height 14.05 ft (4.282 m); no flow for part of Mar. 20, 1965, caused by construction work above station; minimum daily, 0.10 ft³/s (0.003 m³/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 20	1945	1100	31.2	5.80	1.768	June 28	1945	*1600	45.3	8.29	2.527
Oct. 31	0545	1000	28.3	5.36	1.634	July 17	2245	748	21.2	4.33	1.320
Mar. 13	1130	1090	30.9	5.76	1.756	July 25	1900	859	24.3	4.74	1.445
Mar. 22	1245	936	26.5	5.05	1.539	Aug. 31	2000	1570	44.5	8.17	2.490
Apr. 2	1400	738	20.9	4.30	1.311	Sept. 6	1945	635	18.0	3.96	1.207
Apr. 4	2245	555	15.7	3.74	1.140						

Minimum discharge, 0.70 ft³/s (0.020 m³/s) June 22, 23, 24, 26, 27, 28, gage height, 1.29 ft (0.393 m); minimum daily, 0.83 ft³/s (0.024 m³/s) June 22-24, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	14	3.1	2.2	2.0	4.5	4.3	3.5	3.2	3.1	1.7	22
2	54	7.8	4.2	2.3	2.1	4.2	112	3.5	9.2	2.3	1.5	5.2
3	82	6.6	2.8	3.3	2.1	3.7	23	3.4	1.7	1.8	2.3	3.5
4	11	5.9	2.6	2.8	3.5	17	60	4.4	1.4	1.7	1.4	3.0
5	6.1	5.0	2.6	2.8	2.4	8.7	114	4.0	1.3	1.6	1.2	2.6
6	4.7	4.5	2.8	2.5	1.8	5.6	23	21	4.5	14	1.3	60
7	4.1	4.3	73	3.5	1.8	4.7	10	8.0	2.4	14	1.1	12
8	4.3	4.0	11	2.8	1.8	4.0	7.8	4.2	1.5	3.9	12	3.9
9	67	3.7	6.1	2.5	2.5	3.9	6.5	3.1	20	2.5	7.0	3.7
10	9.4	3.8	5.4	14	4.0	3.7	6.1	2.9	4.5	2.0	11	3.7
11	5.4	3.6	5.2	4.0	12	3.6	5.7	3.0	2.0	1.8	4.6	2.4
12	4.2	3.6	5.5	2.5	9.0	3.6	5.3	3.0	1.6	7.3	2.0	2.2
13	4.0	3.3	4.2	2.2	10	211	4.9	2.4	1.4	5.7	2.2	2.3
14	3.7	3.3	3.6	2.5	8.0	35	4.7	3.7	1.4	2.1	3.1	1.9
15	3.0	3.3	4.0	4.0	5.0	10	4.3	2.0	3.3	1.6	2.2	1.8
16	2.8	3.3	4.3	5.0	3.4	7.1	4.2	2.0	1.6	1.4	1.6	2.1
17	5.1	3.3	4.0	2.5	2.8	5.5	4.0	2.1	5.6	35	24	3.4
18	3.4	3.2	3.6	2.9	2.5	24	3.8	2.3	5.6	23	4.6	2.1
19	2.8	3.1	3.5	2.0	2.8	8.1	3.9	4.3	1.5	4.2	2.2	1.8
20	166	3.0	6.4	2.0	2.5	12	3.9	2.0	1.9	6.6	1.7	2.3
21	39	3.0	17	5.5	2.5	7.8	3.9	1.9	1.8	2.7	1.7	1.6
22	10	2.9	7.4	2.2	2.5	177	3.9	1.8	.83	1.6	8.2	6.3
23	6.5	2.7	3.6	2.0	2.7	24	3.6	1.8	.83	1.3	2.1	2.9
24	9.6	3.3	2.7	2.2	32	9.2	36	1.8	.83	1.2	8.9	2.2
25	26	2.9	3.0	2.0	13	6.8	19	5.0	.98	56	4.0	2.2
26	46	2.8	5.4	2.0	6.3	5.9	11	2.5	.98	9.0	2.0	2.3
27	8.7	3.4	3.6	2.0	6.6	5.5	5.0	1.9	.83	2.9	1.7	2.3
28	6.3	3.1	3.4	2.0	6.0	7.8	5.0	1.6	150	2.0	1.5	3.1
29	5.5	13	3.2	2.2	---	5.9	6.3	1.7	23	1.7	1.4	1.8
30	5.5	4.7	3.0	1.9	---	5.4	3.8	1.5	4.9	3.9	23	1.4
31	144	---	2.6	1.9	---	4.5	---	1.7	---	2.1	171	---
TOTAL	765.1	134.4	212.8	94.2	153.6	639.7	508.9	108.0	260.58	220.0	314.2	168.0
MEAN	24.7	4.48	6.86	3.04	5.49	20.6	17.0	3.48	8.69	7.10	10.1	5.60
MAX	166	14	73	14	32	211	114	21	150	56	171	60
MIN	2.8	2.7	2.6	1.9	1.8	3.6	3.6	1.5	.83	1.2	1.1	1.4
CFSM	3.25	.59	.90	.40	.72	2.71	2.23	.46	1.14	.93	1.33	.74
IN.	3.74	.66	1.04	.46	.75	3.13	2.49	.53	1.27	1.08	1.54	.82

CAL YR 1976 TOTAL 4390.62 MEAN 12.0 MAX 685 MIN .64 CFSM 1.58 IN 21.46
WTR YR 1977 TOTAL 3579.48 MEAN 9.81 MAX 211 MIN .83 CFSM 1.29 IN 17.50

01585200 WEST BRANCH HERRING RUN AT IDLEWYLDE, MD

LOCATION.--Lat 39°22'25", long 76°35'05", Baltimore County, Hydrologic Unit 02060003, on left bank 40 ft (12 m) downstream from bridge on Regester Avenue, at Idlewylde, 0.1 mi (0.2 km) north of Baltimore city limits, 1 mi (1.6 km) upstream from mouth, and 1.3 mi (2.1 km) east of State Highway 45.

DRAINAGE AREA.--2.13 mi^2 (5.52 km^2).

PERIOD OF RECORD.--July 1957 to May 1965, January 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 285 ft (87 m), from topographic map. Prior to May 31, 1965, at site 40 ft (12 m) upstream at datum 3.24 ft (0.988 m) higher.

REMARKS.--Records good except those for periods of fragmentary or no gage-height record, Feb. 7 to Apr. 1, which are fair. Diurnal fluctuation (occasionally extensive) caused by ready-mixed concrete plant above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1958-64, 1967-77), 2.56 ft^3/s (0.0725 m^3/s), 16.32 in/yr (415 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft^3/s (49.3 m^3/s) Sept. 11, 1971, gage height, 6.80 ft (2.073 m), from rating curve extended above 90 ft^3/s (2.55 m^3/s) on basis of slope-area measurement at gage height 6.37 ft (1.942 m); no flow Aug. 14-24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 290 ft^3/s (8.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
June 17	2000	313	8.86	3.54	1.079	July 25	1715	445	12.6	4.02	1.225
June 28	1730	421	11.9	3.94	1.201	Aug. 17	1415	313	8.86	3.54	1.079
July 17	2145	321	9.09	3.57	1.088	Sep. 6	1815	*585	16.6	4.45	1.356

Minimum discharge, 0.07 ft^3/s (0.002 m^3/s) July 16, gage height, 0.75 ft (0.229 m); minimum daily, 0.20 ft^3/s (0.005 m^3/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.7	.90	.68	.50	1.2	1.1	1.1	4.8	.52	.34	.53
2	18	1.4	.85	.72	.50	1.0	24	.93	1.1	.44	.35	.33
3	13	1.3	.85	.78	.50	.90	3.3	.88	.82	.41	.33	.30
4	1.5	1.3	.80	.93	.80	5.0	20	1.9	.66	.58	.31	.30
5	1.1	1.2	.80	.88	.60	2.0	18	1.3	.68	1.1	1.0	.32
6	.58	1.1	.80	.88	.55	1.2	3.1	6.7	3.4	.63	.38	15
7	.89	1.1	18	1.3	.50	1.1	2.3	1.2	.77	3.6	.32	1.4
8	1.6	.97	1.5	1.3	.50	1.0	2.2	.91	.62	.69	6.5	.42
9	15	.95	1.1	1.0	.60	.90	2.1	.77	8.7	.44	.73	.99
10	1.5	.90	1.0	6.1	.90	.80	1.8	.82	.82	.49	9.4	.50
11	1.5	.85	.97	1.0	3.1	.70	1.5	.78	.72	.95	1.7	.42
12	.90	.85	1.1	.85	2.4	.70	1.5	.76	.87	1.5	.50	.29
13	.95	.85	.84	.80	2.6	24	1.4	.73	.50	.87	.49	.46
14	.83	.85	.84	.85	2.3	2.5	1.4	.77	.57	.37	2.3	.65
15	.76	.85	.88	2.6	1.5	2.0	1.3	.70	2.1	.22	.40	.27
16	.81	.91	.88	.90	.90	1.7	1.4	.75	.75	.20	.39	1.3
17	2.1	.91	.84	.60	.60	1.4	1.4	.81	8.8	11	12	.60
18	.73	.84	.84	.70	.60	3.5	1.2	3.0	1.1	3.3	.59	.30
19	.71	.88	.88	.50	.80	2.2	1.1	.96	.58	.51	.45	1.9
20	32	.80	2.7	.50	.70	3.0	1.1	.64	3.2	4.0	.42	.69
21	3.1	.81	1.1	1.0	.60	2.2	1.1	.78	.58	.41	.39	.27
22	1.6	.79	.84	.60	.60	27	1.1	1.1	.48	.34	1.7	.50
23	1.2	.88	.88	.50	.70	2.5	1.1	1.1	.45	.31	.35	.34
24	3.6	.77	.88	.55	9.0	2.0	9.1	2.6	.44	.33	1.6	.37
25	6.9	.78	.84	.50	2.5	1.8	2.9	2.8	.50	21	.42	.40
26	4.4	.77	1.8	.50	1.6	1.6	1.6	.64	.42	1.1	.32	.36
27	1.3	1.0	.80	.50	1.8	1.6	1.1	.62	.36	.49	.32	.81
28	1.1	.97	.84	.50	1.7	3.0	2.5	.63	25	.39	.33	.89
29	1.2	10	.80	.55	---	1.6	1.4	.64	1.8	.37	.29	.22
30	3.7	1.3	.76	.50	---	1.4	.98	.85	.62	1.7	.34	.21
31	19	---	.72	.50	---	1.2	---	1.4	---	.41	5.9	---
TOTAL	144.76	38.58	47.63	30.07	39.95	102.70	114.08	39.57	72.21	58.67	50.86	31.34
MEAN	4.67	1.29	1.54	.97	1.43	3.31	3.80	1.28	2.41	1.89	1.64	1.04
MAX	32	10	18	6.1	9.0	27	24	6.7	25	21	12	15
MIN	.71	.77	.72	.50	.50	.70	.98	.62	.36	.20	.29	.21
CFSM	2.19	.61	.72	.46	.67	1.55	1.78	.60	1.13	.89	.77	.49
IN.	2.53	.67	.83	.52	.70	1.79	1.99	.69	1.26	1.02	.89	.55

CAL YR 1976 TOTAL 983.05 MEAN 2.69 MAX 76 MIN .22 CFSM 1.26 IN 17.17
WTR YR 1977 TOTAL 770.42 MEAN 2.11 MAX 32 MIN .20 CFSM .99 IN 13.45

01585300 STEMMERS RUN AT ROSSVILLE, MD

LOCATION.--Lat 39°20'28", long 76°29'17", Baltimore County, Hydrologic Unit 02060003, on left bank 500 ft (152 m) upstream from bridge on State Highway 7, at Rossville, 0.9 mi (1.4 km) upstream from Brien Run, and 2.1 mi (3.4 km) upstream from mouth.

DRAINAGE AREA.--4.46 mi^2 (11.55 km^2).

PERIOD OF RECORD.--December 1958 to September 1972, October 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 21.64 ft (6.596 m) above mean sea level (Baltimore County bench mark). Prior to Sept. 30, 1972, at site on old channel about 550 ft (168 m) southeast of present site at datum 2.40 ft (0.732 m) lower.

REMARKS.--Records good. Slight diurnal fluctuation at times from unknown source. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1960-72, 1974-77), 6.34 ft^3/s (0.180 m^3/s), 19.30 in/yr (490 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,950 ft^3/s (169 m^3/s) Aug. 1, 1971, gage height, 11.34 ft (3.456 m), from high-water mark in well, site and datum then in use, from rating curve extended above 1,100 ft^3/s (31.2 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum daily, 0.10 ft^3/s (0.003 m^3/s) many days in 1962, 1964, and 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (20 m^3/s) revised, and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 20	1900	893	25.3	3.70	1.128	June 28	1900	*1250	35.4	4.20	1.280
Oct. 31	0545	878	24.9	3.68	1.122	July 12	1900	989	28.0	3.83	1.167
Mar. 13	1100	962	27.2	3.79	1.155	July 17	2215	800	22.7	3.57	1.088
Mar. 22	1215	715	20.2	3.44	1.049	Aug. 31	1930	1160	32.9	4.08	1.244
Apr. 24	1945	754	21.4	3.50	1.067	Sept. 6	1900	1010	28.6	3.86	1.177

Minimum daily, 0.36 ft^3/s (0.010 m^3/s) Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	4.8	1.1	.68	.80	1.9	1.8	1.7	4.8	1.0	.51	4.4
2	40	2.9	1.3	.79	.85	1.5	87	1.7	1.4	.83	.39	1.4
3	42	2.6	1.1	1.1	.85	1.4	8.8	1.6	.61	.61	.48	.93
4	4.0	2.5	1.1	1.1	1.3	7.7	47	2.3	.60	.56	.40	.72
5	2.4	2.1	1.0	1.0	1.0	3.4	68	2.2	3.2	.57	4.4	.65
6	1.9	1.9	.97	.86	.85	2.1	11	19	1.4	1.1	.99	54
7	1.6	1.9	52	1.2	.75	1.8	5.2	3.9	.60	6.2	.42	4.0
8	1.9	1.7	4.4	1.1	.75	1.5	4.0	2.1	.55	1.2	14	1.3
9	33	1.6	1.9	.95	.90	1.4	3.2	1.6	20	.60	2.9	1.4
10	3.3	1.6	1.9	6.0	1.2	1.3	3.0	1.5	1.5	.51	8.1	1.5
11	2.0	1.5	2.0	2.3	5.0	1.2	2.9	1.4	.70	.49	2.0	.70
12	1.6	1.5	2.1	1.1	3.9	1.2	2.7	1.4	.60	45	.56	.60
13	1.9	1.5	1.7	.76	4.3	129	2.6	1.2	.60	3.6	.65	.57
14	2.3	1.6	1.5	.93	3.5	12	2.4	1.1	.60	.96	1.2	.54
15	1.3	1.5	1.6	1.6	2.2	4.3	2.2	1.3	2.0	.63	.74	.50
16	1.1	1.7	1.7	1.8	1.6	2.9	2.0	2.0	.70	.57	.44	.61
17	2.8	1.5	1.6	.97	1.1	2.3	2.0	1.5	6.0	30	22	1.3
18	1.5	1.3	1.4	1.3	1.0	15	1.9	1.9	1.1	6.9	1.6	.66
19	1.4	1.3	1.4	.57	1.2	3.6	1.9	1.3	.60	1.5	.61	.50
20	115	1.3	3.3	.65	1.2	6.1	1.8	.93	1.3	4.1	.47	.56
21	12	1.2	3.0	2.0	.97	3.2	1.7	.93	.55	.85	.43	.41
22	3.0	1.2	1.5	1.0	1.1	119	1.8	.92	.48	.49	4.3	5.9
23	2.2	1.0	1.5	.75	1.3	8.1	1.7	.90	.46	.37	.55	.84
24	4.7	1.1	1.1	.90	22	4.1	44	.98	.46	.39	9.5	.59
25	23	1.1	1.3	.75	5.8	2.8	9.4	4.3	.48	24	1.4	.55
26	25	1.0	2.9	.80	2.6	2.7	6.0	.92	.47	2.6	.50	.64
27	3.2	1.4	1.6	.80	2.9	2.7	2.5	.80	.42	.75	.42	.62
28	2.4	1.2	1.6	.80	2.7	4.2	2.6	.73	73	.55	.41	1.9
29	2.1	7.2	1.3	.90	---	2.7	3.6	.69	5.1	.51	.36	.47
30	2.7	1.6	1.2	.75	---	2.3	1.9	.75	1.3	2.5	14	.38
31	96	---	.95	.75	---	2.0	---	1.1	---	.65	65	---
TOTAL	445.1	56.3	103.02	36.96	73.62	355.4	336.6	64.65	131.58	140.59	159.73	89.14
MEAN	14.4	1.88	3.32	1.19	2.63	11.5	11.2	2.09	4.39	4.54	5.15	2.97
MAX	115	7.2	52	6.0	22	129	87	19	73	45	65	54
MIN	1.1	1.0	.95	.57	.75	1.2	1.7	.69	.42	.37	.36	.38
CFSM	3.23	.42	.74	.27	.59	2.58	2.51	.47	.98	1.02	1.16	.67
IN.	3.71	.47	.86	.31	.61	2.96	2.81	.54	1.10	1.17	1.33	.74

CAL YR 1976 TOTAL 2316.39 MEAN 6.33 MAX 420 MIN .20 CFSM 1.42 IN 19.32
WTR YR 1977 TOTAL 1992.69 MEAN 5.46 MAX 129 MIN .36 CFSM 1.22 IN 16.62

01585400 BRIEN RUN AT STEMMERS RUN, MD

LOCATION.--Lat 39°20'01", long 76°28'23", Baltimore County, Hydrologic Unit 02060003, on right bank 0.2 mi (0.3 km) upstream from mouth and 0.3 mi (0.5 km) north of Stemmers Run.

DRAINAGE AREA.--1.97 mi² (5.10 km²).

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8.80 ft (2.681 m) above mean sea level (Baltimore County bench mark).

REMARKS.--Records good except those for winter periods, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 2.46 ft³/s (0.070 m³/s), 16.96 in/yr (431 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) Aug. 1, 1971, gage height, 10.75 ft (3.277 m), from high-water mark in well, from rating curve extended above 180 ft³/s (5.10 m³/s) on basis of computation of peak flow through culvert and over road at site 0.8 mile (1.3 km) upstream, adjusted for flow from intervening area; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 20	2000	*175	4.96	2.88	0.878	June 28	1830	159	4.50	2.75	0.838
Oct. 31	0630	160	4.53	2.76	0.841	Aug. 24	1615	173	4.90	2.86	0.872
Mar. 22	1245	151	4.28	2.68	0.817						

Minimum discharge, 0.41 ft³/s (0.012 m³/s) many days in June, July, and August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.0	.58	.42	.45	.96	.63	.58	.91	.59	.41	.77
2	16	1.3	.60	.45	.45	.76	27	.59	.94	.47	.41	.51
3	17	1.1	.56	.60	.45	.72	3.9	.56	.54	.41	2.6	.48
4	1.7	.85	.60	.55	.65	2.8	10	.62	.50	.42	.45	.45
5	.86	.85	.60	.55	.50	1.7	24	.68	.50	.42	.90	.51
6	1.0	.78	.62	.46	.45	1.0	3.6	4.9	1.3	1.9	.47	7.0
7	.96	.72	23	.65	.50	.98	1.7	1.1	.57	2.1	.41	1.5
8	.79	.61	2.4	.55	.70	1.1	1.3	.68	.50	.59	4.3	.55
9	20	.60	.98	.50	.55	.72	.85	.60	7.3	.48	1.3	.63
10	1.7	.60	.87	3.6	2.3	.72	.82	.62	1.0	.42	4.8	.54
11	1.0	.60	.86	1.4	1.6	.72	.79	.60	.56	.44	.70	.48
12	.81	.60	.91	.60	1.3	.72	.81	.64	.50	6.1	.49	.44
13	.79	.60	.78	.46	1.4	23	.80	.60	.50	1.4	.46	.47
14	.89	.60	.66	.50	1.0	4.4	.81	.55	.50	.50	.66	.50
15	.67	.63	.72	.80	.70	1.7	.80	.50	.88	.41	.77	.50
16	.65	.60	.77	.90	.60	1.0	.67	.50	.60	.41	.47	.51
17	1.3	.60	.77	.50	.55	.96	.60	.50	2.2	3.8	6.6	.59
18	.66	.60	.72	.65	.60	6.3	.60	.54	.96	2.0	.93	.50
19	.60	.65	.72	.45	.85	1.6	.60	.56	.53	.50	.48	.53
20	38	.72	1.5	.45	.66	2.1	.61	.50	.70	1.3	.41	.56
21	8.1	.72	1.2	1.0	.64	1.3	.60	.48	.43	.99	.41	.50
22	1.2	.67	.60	.50	.72	38	.60	.50	.41	.50	.59	.86
23	.81	.62	.64	.45	1.1	3.7	.58	.50	.41	.41	.46	.50
24	1.9	.64	.58	.50	7.1	1.4	3.5	.48	.46	.41	20	.59
25	12	.72	.60	.45	2.8	1.2	1.6	3.9	.41	1.1	1.8	.56
26	15	.72	1.3	.45	1.4	.80	1.5	.65	.45	.55	.57	.58
27	1.8	.74	.77	.45	1.5	.72	.71	.50	.41	.41	.50	.62
28	1.6	.73	.72	.45	1.3	1.1	.74	.50	20	.41	.50	.81
29	.83	2.7	.74	.50	---	.86	.94	.50	3.1	.41	.50	.50
30	1.2	.75	.55	.45	---	.76	.60	.50	.85	.89	8.6	.50
31	33	---	.55	.45	---	.88	---	.50	---	.41	1.6	---
TOTAL	185.52	24.62	47.47	20.69	32.82	104.68	92.26	25.43	48.92	31.15	63.55	24.04
MEAN	5.98	.82	1.53	.67	1.17	3.38	3.08	.82	1.63	1.00	2.05	.80
MAX	38	2.7	23	3.6	7.1	38	27	4.9	20	6.1	20	7.0
MIN	.60	.60	.55	.42	.45	.72	.58	.48	.41	.41	.41	.44
CFSM	3.04	.42	.78	.34	.59	1.72	1.56	.42	.83	.51	1.04	.41
IN.	3.50	.46	.90	.39	.62	1.98	1.74	.48	.92	.59	1.20	.45

CAL YR 1976 TOTAL 981.33 MEAN 2.68 MAX 164 MIN .44 CFSM 1.36 IN 18.52
WTR YR 1977 TOTAL 701.15 MEAN 1.92 MAX 38 MIN .41 CFSM .98 IN 13.23

01585500 CRANBERRY BRANCH NEAR WESTMINSTER, MD

LOCATION.--Lat 39°35'35", long 76°58'05", Carroll County, Hydrologic Unit 02060003, on left bank 80 ft (24 m) upstream from culvert, 0.7 mi (1.1 km) upstream from mouth, and 1.8 mi (2.9 km) northeast of Westminster.

DRAINAGEA AREA.--3.29 mi² (8.52 km²).

PERIOD OF RECORD.--September 1949 to current year.

REVISED RECORDS.--WSP 1432: Drainage area, 1954-55. WDR MD-DE-75-1: 1972(M).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 670 ft (204 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Jan. 26, which are fair. Occasional small diversions to and releases from Cranberry Reservoir located offstream 1 mi (1.6 km) above station since August 1957, capacity, 113,700,000 gal (430,400 m³). Beginning October 1972 occasional large diversions past the gaging station from the reservoir through a 30 in (0.76 m) pipe. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 3.58 ft³/s (0.101 m³/s), 14.78 in/yr (375 mm/yr), unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft³/s (62.9 m³/s) Sept. 26, 1975, gage height, 7.47 ft (2.277 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on the basis of computations of flows through culvert at gage heights 5.54 ft (1.689 m) and 7.47 ft (2.277 m); minimum daily, 0.27 ft³/s (0.008 m³/s) Dec. 3, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 86 ft³/s (2.44 m³/s) Apr. 5, gage height, 2.92 ft (0.890 m); minimum daily, 0.21 ft³/s (0.006 m³/s) Sept. 9, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	6.0	2.4	2.0	1.6	2.5	2.8	3.2	11	2.0	.38	.36
2	1.2	4.5	2.5	1.9	1.6	2.3	18	3.3	4.2	1.9	.39	.38
3	.85	3.7	2.2	1.9	1.6	2.2	7.4	3.2	2.6	1.8	.40	.41
4	.75	3.5	2.2	2.0	1.8	11	11	4.1	2.3	1.8	.42	.50
5	.66	3.3	2.2	1.9	1.8	5.0	34	4.9	2.3	1.7	.48	.39
6	.63	3.3	2.2	1.9	1.6	3.5	11	4.3	2.6	1.7	.41	.24
7	.57	3.3	14	1.9	1.5	3.0	8.1	3.6	2.4	2.2	.40	.24
8	1.0	3.1	4.1	2.2	1.5	2.8	6.9	3.1	2.2	1.8	.39	.22
9	25	3.1	3.0	2.1	1.5	2.6	6.1	3.0	3.9	1.8	.39	.21
10	6.0	3.1	2.9	2.0	1.8	2.5	5.6	2.9	2.7	1.7	2.7	.22
11	4.0	2.9	3.0	1.9	6.6	2.4	5.2	2.8	2.3	1.8	.56	.21
12	3.5	2.9	3.0	1.8	5.0	2.4	4.9	2.7	2.2	1.7	.42	.22
13	3.3	2.9	2.8	1.8	4.0	11	4.6	2.6	2.1	1.9	.52	.23
14	3.1	2.7	2.5	1.8	3.5	5.9	4.4	2.5	2.1	1.6	.84	.22
15	3.0	2.7	2.7	1.8	3.0	3.8	4.2	2.4	2.1	1.6	.57	.22
16	2.7	2.7	2.8	1.8	2.4	3.2	4.0	2.4	2.0	1.5	.50	.26
17	3.0	2.6	2.7	1.7	2.2	2.8	3.9	2.4	4.1	2.1	1.3	.26
18	2.7	2.6	2.6	1.5	2.0	3.8	3.8	2.3	2.7	1.8	.53	.25
19	2.7	2.6	2.5	1.5	2.1	2.9	3.8	2.3	2.1	1.6	.47	.34
20	10	2.5	2.9	1.5	2.2	3.3	3.6	2.2	2.0	2.9	.44	.32
21	8.0	2.5	2.6	1.5	2.0	3.1	3.6	2.3	2.0	1.4	.51	.28
22	5.0	2.5	2.3	1.5	2.0	21	3.5	2.2	1.9	1.3	.49	.30
23	3.5	2.5	2.4	1.6	2.2	6.6	3.4	2.2	1.8	1.2	.44	.31
24	4.0	2.3	2.2	1.6	4.6	4.7	4.7	2.1	1.8	1.1	.43	.31
25	5.0	2.6	2.2	2.0	3.8	4.0	4.4	2.2	1.9	.91	.38	.35
26	8.0	2.6	2.5	1.9	2.9	3.6	3.8	2.1	1.8	.91	.42	.35
27	6.0	2.6	2.4	1.9	3.2	3.4	3.5	2.0	1.7	.75	.42	.38
28	4.5	2.5	2.3	1.8	3.0	4.3	3.9	2.0	13	.41	.40	.41
29	3.7	3.8	2.3	1.7	---	3.7	4.0	1.9	2.9	.63	.48	.37
30	3.7	2.6	2.1	1.6	---	3.3	3.4	1.9	2.2	.43	.58	.30
31	9.0	---	2.0	1.6	---	2.9	---	1.9	---	.39	.52	---
TOTAL	139.16	90.5	90.5	55.6	73.0	139.5	191.5	83.0	90.9	46.33	17.58	9.06
MEAN	4.49	3.02	2.92	1.79	2.61	4.50	6.38	2.68	3.03	1.49	.57	.30
MAX	25	6.0	14	2.2	6.6	21	34	4.9	13	2.9	2.7	.50
MIN	.57	2.3	2.0	1.5	1.5	2.2	2.8	1.9	1.7	.39	.38	.21

CAL YR 1976 TOTAL 1326.00 MEAN 3.62 MAX 50 MIN .34
WTR YR 1977 TOTAL 1026.63 MEAN 2.81 MAX 34 MIN .21

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD

LOCATION.--Lat 39°30'00", long 76°53'00", Carroll County, Hydrologic Unit 02060003, on left bank at downstream side of private footbridge at Cedarhurst, 0.8 mi (1.3 km) downstream from Roaring Run, 8 mi (12.9 km) southeast of Westminster, and 16.5 mi (26.5 km) upstream from confluence with South Branch.

DRAINAGE AREA.--56.6 mi^2 (146.6 km^2).

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WSP 1903: 1959-60.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 425 ft (130 m), from topographic map.

REMARKS.--Records good. Slight diurnal fluctuation at low and medium flow caused by mill above station. Low flow affected slightly by Cranberry Reservoir since August 1957, capacity, 113,700,000 gal (430,400 m^3). Records do not include a mean discharge of 1.92 ft^3/s (0.054 m^3/s) diverted above station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek in Monocacy River basin. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 63.7 ft^3/s (1.804 m^3/s), 15.28 in/yr (388 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,800 ft^3/s (787 m^3/s) June 22, 1972, gage height, 20.75 ft (6.325 m), from high-water mark in well, from rating curve extended above 4,100 ft^3/s (116 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 1.9 ft^3/s (0.054 m^3/s) Sept. 10, 1966, result of filling pond above station; minimum daily, 3.1 ft^3/s (0.088 m^3/s) Sept. 10, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (
Oct. 9	1200	*2050	58.1	6.70	2.042	Apr. 2	1530	1040	29.5	4.63	1.411
Mar. 22	1445	1200	34.0	5.01	1.527	Apr. 5	0330	1610	45.6	5.92	1.804

Minimum discharge, 4.0 ft^3/s (0.11 m^3/s) Aug. 30, gage height, 1.20 ft (0.366 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	74	39	29	25	40	53	54	61	30	18	24
2	220	63	40	32	24	38	286	54	98	27	17	17
3	139	59	36	32	25	35	137	54	38	25	16	16
4	68	58	38	35	27	144	130	56	32	25	17	16
5	48	54	36	32	27	96	714	70	32	24	15	16
6	41	51	38	32	24	66	202	79	39	23	17	16
7	38	51	224	35	23	58	147	66	36	31	15	18
8	75	49	77	32	23	51	125	56	32	30	16	16
9	589	48	56	34	23	48	109	49	59	25	18	15
10	104	49	51	36	27	46	102	48	42	25	36	15
11	76	48	51	31	83	43	94	46	35	24	53	13
12	72	48	53	28	98	42	87	45	32	25	21	13
13	70	46	49	26	102	245	81	43	30	24	28	13
14	66	46	40	28	64	154	79	40	30	23	35	12
15	63	46	43	31	51	89	74	38	32	19	28	13
16	61	45	45	31	39	74	70	36	30	19	21	13
17	68	43	45	25	32	64	68	36	63	23	59	17
18	59	45	42	26	31	79	64	35	72	53	35	13
19	56	43	42	26	34	64	64	35	36	24	23	15
20	154	42	43	27	35	68	63	34	32	42	20	21
21	132	42	46	26	31	64	61	34	32	26	19	14
22	61	40	36	26	31	378	59	34	28	23	25	13
23	53	39	40	26	35	139	58	32	27	19	18	13
24	68	39	35	26	74	96	61	32	26	19	19	14
25	89	40	36	28	76	81	79	35	27	20	21	14
26	123	42	42	28	49	72	79	35	27	27	17	16
27	68	42	39	28	49	66	59	31	25	18	17	15
28	59	42	39	27	51	79	59	30	120	17	17	17
29	56	63	39	25	---	72	68	30	68	17	15	14
30	54	43	32	26	---	63	58	30	35	25	15	13
31	144	---	30	25	---	58	---	31	---	21	31	---
TOTAL	3068	1440	1502	899	1213	2712	3390	1328	1276	773	722	455
MEAN	99.0	48.0	48.5	29.0	43.3	87.5	113	42.8	42.5	24.9	23.3	15.2
MAX	589	74	224	36	102	378	714	79	120	53	59	24
MIN	38	39	30	25	23	35	53	30	25	17	15	12
CFSM	1.75	.85	.86	.51	.77	1.55	2.00	.76	.75	.44	.41	.27
IN.	2.02	.95	.99	.59	.80	1.78	2.23	.87	.84	.51	.47	.30

CAL YR 1976 TOTAL 26802 MEAN 73.2 MAX 633 MIN 20 CFSM 1.29 IN 17.62
WTR YR 1977 TOTAL 18778 MEAN 51.4 MAX 714 MIN 12 CFSM .91 IN 12.34

01587500 SOUTH BRANCH PATAPSCO RIVER AT HENRYTON, MD

LOCATION.--Lat 39°21'05", long 76°54'50", Howard County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Henryton Road at Henryton, 1.3 mi (2.1 km) upstream from Piney Run, 2.5 mi (4.0 km) upstream from confluence with North Branch, and 3.2 mi (5.1 km) southeast of Sykesville.

DRAINAGE AREA.--64.4 mi² (166.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 289.15 ft (88.133 m) above mean sea level.

REMARKS.--Water-discharge records good except those for period of doubtful or no gage-height record, Dec. 31 to Apr. 22, which are fair.

AVERAGE DISCHARGE.--29 years, 71.7 ft³/s (2.031 m³/s), 15.12 in/yr (384 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,900 ft³/s (762 m³/s) June 22, 1972, gage height, 28.14 ft (8.577 m), from floodmarks, from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurements at gage height 7.88 ft (2.402 m) and 28.14 ft (8.577 m), and contracted-opening measurements at gage heights 10.12 ft (3.085 m) and 19.40 ft (5.913 m); minimum, 0.40 ft³/s (0.011 m³/s) Sept. 9-12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 950 ft³/s (26 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1400	*2320	65.7	7.14	2.176	Aug. 17	1830	1130	32.0	4.56	1.390
Apr. 5	0330	1060	30.0	4.4	1.34						

Minimum discharge, 14 ft³/s (0.40 m³/s) Sept. 14, 15, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	82	54	34	30	50	55	55	36	25	15	20
2	141	72	49	36	30	46	250	55	49	23	15	20
3	365	68	58	36	30	42	140	55	35	21	15	19
4	86	66	45	42	34	100	140	57	31	20	15	18
5	58	62	44	36	36	110	500	61	31	21	29	17
6	50	60	45	36	32	75	200	116	40	20	28	18
7	46	58	228	44	30	65	150	96	39	24	25	17
8	71	56	93	36	28	55	130	64	33	24	19	16
9	655	54	71	40	28	55	120	56	54	21	27	17
10	152	56	60	44	34	50	110	54	48	20	24	19
11	83	54	56	40	70	50	95	51	36	22	51	16
12	68	53	58	36	100	48	90	50	32	22	43	15
13	61	52	55	34	110	150	85	48	30	21	22	15
14	56	51	51	36	60	100	80	46	30	18	23	15
15	52	51	55	40	50	90	75	44	32	16	28	15
16	50	50	51	36	42	75	70	43	31	16	19	15
17	50	49	51	30	44	65	70	43	38	21	257	18
18	50	50	48	32	38	75	65	43	69	66	82	16
19	47	49	46	32	40	65	65	49	34	22	38	16
20	151	48	49	34	44	70	65	43	44	25	31	20
21	169	48	51	32	38	90	65	41	53	23	28	16
22	71	48	44	32	38	350	65	39	31	19	31	15
23	60	46	46	32	42	120	60	38	28	16	27	15
24	62	46	45	32	70	100	66	38	26	15	27	15
25	78	46	41	36	85	85	80	43	27	18	28	15
26	112	46	48	40	60	75	73	43	28	23	24	17
27	70	47	46	36	60	70	62	38	25	16	23	17
28	62	46	46	34	60	80	61	36	65	15	23	19
29	59	67	46	32	---	70	68	34	50	15	21	15
30	57	54	38	32	---	60	58	34	28	17	21	14
31	165	---	34	30	---	55	---	36	---	16	21	---
TOTAL	3330	1635	1752	1102	1363	2591	3213	1549	1133	661	1080	500
MEAN	107	54.5	56.5	35.5	48.7	83.6	107	50.0	37.8	21.3	34.8	16.7
MAX	655	82	228	44	110	350	500	116	69	66	257	20
MIN	46	46	34	30	28	42	55	34	25	15	15	14
CFSM	1.66	.85	.88	.55	.76	1.30	1.66	.78	.59	.33	.54	.26
IN.	1.92	.94	1.01	.64	.79	1.50	1.86	.89	.65	.38	.62	.29

CAL YR 1976 TOTAL 29200 MEAN 79.8 MAX 1160 MIN 18 CFSM 1.24 IN 16.87
WTR YR 1977 TOTAL 19909 MEAN 54.5 MAX 655 MIN 14 CFSM .85 IN 11.50

01587500 SOUTH BRANCH PATAPSCO RIVER AT HENRYTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-74, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	AIR TEMPER-ATURE (DEG C)	TEMPER-ATURE (DEG C)	WEATHER	COLOR (PLAT-INUM-COBALT UNITS)	HARD-NESS (CA,MG) (MG/L)
OCT									
15...	1015	54	125	8.2	12.0	11.0	1	--	--
NOV									
12...	1005	53	125	7.2	3.0	5.0	2	--	--
DEC									
28...	1515	46	139	7.3	2.0	.5	1	--	--
FEB									
16...	1035	44	128	6.9	-4.0	.0	0	--	--
MAR									
21...	1045	58	145	8.0	7.0	6.0	--	5	38
30...	1510	57	--	--	28.0	18.0	--	--	--
MAY									
11...	1130	54	120	7.6	20.0	14.5	1	--	--
JUN									
21...	1515	42	--	--	28.0	22.0	--	--	--
SEP									
12...	1430	14	155	8.4	25.0	19.0	0	10	54

DATE	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT									
15...	--	--	--	--	--	--	--	--	--
NOV									
12...	--	--	--	--	--	--	--	--	--
DEC									
28...	--	--	--	--	--	--	--	--	--
FEB									
16...	--	--	--	--	--	--	--	--	--
MAR									
21...	13	9.8	3.3	7.0	2.4	30	8.1	11	.1
30...	--	--	--	--	--	--	--	--	--
MAY									
11...	--	--	--	--	--	--	--	--	--
JUN									
21...	--	--	--	--	--	--	--	--	--
SEP									
12...	8	16	3.5	8.5	3.1	56	7.7	11	.2

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
15...	--	--	--	--	--	--	--	--	--
NOV									
12...	--	--	--	--	--	--	--	--	--
DEC									
28...	--	--	--	--	--	--	--	--	--
FEB									
16...	--	--	--	--	--	--	--	--	--
MAR									
21...	7.[illegible]	77	64	2.1	.11	490	70	40	50
30...	--	--	--	--	--	--	--	--	--
MAY									
11...	--	--	--	--	--	--	--	--	--
JUN									
21...	--	--	--	--	--	--	--	--	--
SEP									
12...	6.8	95	85	1.4	.35	230	110	60	60

01589000 PATAPSCO RIVER AT HOLLOFIELD, MD

LOCATION.--Lat 39°18'36", long 76°47'34", Baltimore County, Hydrologic Unit 0206003, on left bank at downstream side of highway bridge at Hollofield, 0.3 mi (0.5 km) downstream from Dogwood Run, 3.0 mi (4.8 km) north of Ellicott City, and 28 mi (45 km) upstream from mouth.

DRAINAGE AREA.--285 mi^2 (738 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 187.7 ft (57.21 m) above mean sea level. June 26 to Dec. 8, 1972, nonrecording gage at same site and datum. Prior to June 22, 1972, water-stage recorder at site on opposite bank at same datum.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Flow regulated by Liberty Reservoir 11 mi (18 km) upstream beginning July 22, 1954, usable capacity, 42,070,000,000 gal (159.2 hm^3); dead storage, 1,260,000,000 gal (4.769 hm^3). Diversions above station for municipal supply of Westminster (sewage effluent discharged into Little Pipe Creek), and from Liberty Reservoir beginning Feb. 26, 1953, for municipal supply of Baltimore, and beginning February 1970 for a small municipal supply for part of Carroll County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,600 ft^3/s (2,280 m^3/s) June 22, 1972, gage height, 31.3 ft (9.54 m), from floodmarks, from rating curve extended above 27,000 ft^3/s (765 m^3/s) on basis of slope-area measurement of peak flow; minimum, 6 ft^3/s (0.17 m^3/s) Sept. 6, 1944; minimum daily, 9.6 ft^3/s (0.27 m^3/s) Aug. 12, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,150 ft^3/s (89.2 m^3/s) Oct. 9, gage height, 5.25 ft (1.600 m); minimum, 21 ft^3/s (0.59 m^3/s) Sept. 12-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	183	81	73	65	97	112	104	65	51	33	31
2	280	143	89	75	60	89	360	102	84	47	32	29
3	884	130	86	80	60	84	293	100	69	43	31	28
4	217	125	82	80	70	114	272	106	60	41	31	28
5	137	118	86	80	75	159	1230	115	58	41	44	27
6	115	110	83	75	70	121	475	132	69	41	66	27
7	104	107	426	85	65	108	309	204	77	47	50	26
8	113	103	199	80	65	98	256	123	62	56	42	26
9	1020	99	129	85	65	93	219	106	86	46	65	25
10	348	99	118	80	150	91	200	101	99	45	65	28
11	184	97	113	80	200	87	186	99	70	57	99	26
12	144	96	113	75	220	84	174	94	62	61	79	22
13	126	92	110	70	150	386	162	91	59	49	53	21
14	118	91	95	80	120	385	155	89	56	44	52	21
15	105	91	100	85	100	183	148	84	58	39	56	21
16	101	90	100	80	90	148	142	79	60	37	45	22
17	99	89	100	75	80	128	136	78	71	40	312	27
18	99	91	98	80	75	143	133	78	180	133	239	29
19	92	89	94	80	80	137	132	95	79	55	68	29
20	255	86	96	80	85	124	126	84	75	57	51	43
21	426	86	107	75	80	133	120	78	106	53	43	32
22	151	86	90	75	75	726	116	74	64	42	51	27
23	121	84	90	70	85	376	114	70	58	36	41	26
24	119	82	85	70	147	218	117	66	54	33	39	27
25	156	82	85	80	223	175	150	79	53	45	43	27
26	243	82	95	75	120	157	133	86	54	56	36	29
27	150	83	90	70	109	141	115	72	50	39	35	31
28	127	84	80	70	111	144	111	67	55	34	33	36
29	120	120	80	70	---	150	121	63	175	32	33	31
30	117	112	85	65	---	128	109	61	59	37	33	27
31	336	---	80	65	---	122	---	63	---	38	38	---
TOTAL	6735	3030	3365	2363	2895	5329	6426	2843	2227	1475	1938	829
MEAN	217	101	109	76.2	103	172	214	91.7	74.2	47.6	62.5	27.6
MAX	1020	183	426	85	223	726	1230	204	180	133	312	43
MIN	92	82	80	65	60	84	109	61	50	32	31	21
(≠)	41570	40800	39450	36810	35200	36400	38750	36990	36180	33750	31180	28310
(‡)	173	201	229	247	255	227	242	228	183	206	206	194

CAL YR 1976 TOTAL 72641 MEAN 198 MAX 4050 MIN 33 ‡ 211
WTR YR 1977 TOTAL 39455 MEAN 108 MAX 1230 MIN 21 ‡ 216

≠ Month-end contents, in millions of gallons in Liberty Reservoir, contents on Sept. 30, 1976: 39,180,000,000 gal (148.3 hm^3); records furnishing by Baltimore Department of Public Works.

‡ Diversions, in cubic feet per second, above station for municipal supply of city of Westminster; and from Liberty Reservoir for municipal supply of city of Baltimore, and for part of Carroll County. Records furnished by cities of Westminster and Baltimore, respectively.

01589000 PATAPSCO RIVER AT HOLLOFIELD, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	COLOR (PLATINUM-CORALT UNITS)	HARDNESS (CA,MG) (MG/L)
OCT 15...	1330	102	150	7.6	16.0	13.0	1	--	--
NOV 12...	1500	95	145	7.3	4.5	6.5	2	--	--
DEC 28...	1100	80	180	7.8	5.0	.5	0	--	--
FEB 03...	1028	60	--	--	-.5	.0	--	--	--
16...	1145	100	200	7.1	-4.0	.0	0	--	--
MAR 03...	1620	78	--	--	12.0	6.0	--	--	--
21...	0945	142	165	8.5	7.5	7.0	1	5	49
30...	1135	126	--	--	27.5	16.0	--	--	--
MAY 11...	1430	96	140	8.2	20.0	16.0	1	--	--
JUN 21...	1135	129	--	--	23.0	25.0	--	--	--
JUL 22...	1430	42	190	8.2	25.0	31.0	0	--	--
SEP 12...	1300	24	190	8.8	22.0	21.0	0	15	68

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT 15...	--	--	--	--	--	--	--	--	--
NOV 12...	--	--	--	--	--	--	--	--	--
DEC 28...	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
MAR 03...	--	--	--	--	--	--	--	--	--
21...	18	13	3.9	7.5	2.4	37	11	11	.1
30...	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--
SEP 12...	6	19	5.0	9.8	3.2	73	10	13	.2

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT 15...	--	--	--	--	--	--	--	--	--
NOV 12...	--	--	--	--	--	--	--	--	--
DEC 28...	--	--	--	--	--	--	--	--	--
FEB 03...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
MAR 03...	--	--	--	--	--	--	--	--	--
21...	9.6	86	77	1.6	.05	360	80	60	60
30...	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--
SEP 12...	8.5	117	106	.45	.06	330	40	100	60

01589100 EAST BRANCH HERBERT RUN AT ARBUTUS, MD

LOCATION.--Lat 39°14'24", long 76°41'33", Baltimore County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Tom Day Boulevard at U.S. Route 1 in Arbutus, 0.5 mi (0.8 km) upstream from mouth, and 2 mi (3 km) south of Baltimore city limits.

DRAINAGE AREA.--2.47 mi^2 (6.40 km^2).

PERIOD OF RECORD.--August 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 45 ft (14 m), from topographic map.

REMARKS.--Records fair. Slight regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 3.22 ft^3/s (0.091 m^3/s), 17.70 in/yr (450 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,340 ft^3/s (37.9 m^3/s) June 22, 1972, gage height, 6.35 ft (1.935 m), from rating curve extended above 280 ft^3/s (7.93 m^3/s) on basis of slope-area measurement of flood of July 20, 1956, (prior to establishment of station) at gage height 5.7 ft (1.74 m), from floodmarks, discharge, 1,090 ft^3/s (30.9 m^3/s); minimum daily, 0.30 ft^3/s (0.008 m^3/s) July 24, Sept. 4, 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 580 ft^3/s (16.4 m^3/s) Oct. 2, gage height, 3.67 ft (1.119 m), no other peak above base of 400 ft^3/s (11 m^3/s); minimum daily, 0.35 ft^3/s (0.010 m^3/s) Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	2.5	1.0	.75	.76	.94	1.2	.92	.73	.49	.53	.45
2	45	2.1	1.0	.78	.82	.89	15	.95	.61	.41	.47	.89
3	12	1.9	.98	.89	.91	.89	2.3	.99	.57	.37	.49	.43
4	2.3	1.8	.92	.98	.96	2.7	12	1.5	.52	.37	.42	.36
5	1.7	1.7	.90	1.1	.79	1.1	16	1.3	.52	.45	1.2	.38
6	1.5	1.5	1.2	1.1	.65	.89	3.4	5.4	2.1	.51	1.1	9.3
7	1.3	1.4	15	1.4	.71	.89	2.4	1.3	.62	2.5	.40	.85
8	1.7	1.4	1.8	.89	.87	.87	2.0	.95	.52	.62	2.5	.54
9	12	1.4	1.3	.84	1.1	.84	1.8	.92	8.5	.64	.82	1.8
10	1.7	1.4	1.3	3.6	2.5	.91	1.7	.92	.92	.56	5.8	.58
11	1.4	1.3	1.5	.98	1.8	.87	1.6	.89	.60	3.3	.50	.36
12	1.3	1.4	1.3	.82	1.6	.87	1.5	.85	.58	2.3	.50	.41
13	1.3	1.2	1.2	.78	1.4	36	1.5	.81	.57	.99	.43	.46
14	1.4	1.2	1.1	.70	1.0	3.2	1.5	1.2	.54	.64	2.3	.49
15	1.8	1.3	1.2	1.8	.99	1.8	1.3	.78	.88	.56	.56	.47
16	1.7	1.3	1.2	.80	.87	1.5	1.3	.77	.55	.50	.64	.85
17	2.4	1.3	1.2	.70	.80	1.4	1.4	.79	10	9.0	13	.63
18	1.1	1.2	1.2	.70	.79	6.4	1.5	.78	1.8	1.3	.62	.46
19	1.1	1.2	1.1	.70	.80	1.4	1.5	.79	.58	.56	.49	.53
20	37	1.1	2.5	.80	.78	2.7	1.4	.80	2.2	2.1	.42	.66
21	3.5	1.1	1.4	.80	.74	1.4	1.4	.74	.68	.64	.40	.59
22	1.8	1.2	1.0	.80	.80	21	1.5	.67	.60	.60	.50	1.1
23	1.5	1.1	1.0	.80	.86	2.6	1.5	.73	.57	.49	.49	.59
24	4.1	1.2	.91	.90	7.6	1.9	4.5	.77	.55	.45	2.0	.50
25	11	1.0	.99	1.8	1.6	1.6	1.8	3.5	.63	3.0	.60	.46
26	8.5	.99	2.2	1.2	1.1	1.5	1.3	.89	.65	.73	.46	.58
27	2.3	1.3	1.1	.94	1.2	1.4	1.0	.80	.51	.55	.40	.83
28	2.0	1.3	1.1	1.1	1.0	2.5	1.7	.72	1.7	.55	.35	.80
29	1.9	4.5	1.0	.74	---	1.5	1.4	.66	.73	.56	.41	.43
30	3.6	1.1	.93	.65	---	1.4	.96	.65	.51	1.9	.46	.49
31	24	---	.83	.70	---	1.3	---	.70	---	.48	.45	---
TOTAL	197.7	44.39	51.36	31.54	35.60	105.16	89.36	34.44	41.04	38.12	39.71	27.27
MEAN	6.38	1.48	1.66	1.02	1.28	3.39	2.98	1.11	1.37	1.23	1.28	.91
MAX	45	4.5	15	3.6	7.6	36	16	5.4	10	9.0	13	9.3
MIN	1.1	.99	.83	.65	.65	.84	.96	.65	.51	.37	.35	.36
CFSM	2.58	.60	.67	.41	.52	1.37	1.21	.45	.56	.50	.52	.37
IN.	2.98	.67	.77	.47	.54	1.58	1.35	.52	.62	.57	.60	.41

CAL YR 1976 TOTAL 1031.00 MEAN 2.82 MAX 94 MIN .51 CFSM 1.14 IN 15.53
WTR YR 1977 TOTAL 735.89 MEAN 2.02 MAX 45 MIN .35 CFSM .82 IN 11.08

01589300 GWYNNS FALLS AT VILLA NOVA, MD

LOCATION.--Lat 39°20'45", long 76°44'01", Baltimore County, Hydrologic Unit 02060003, on right bank 300 ft (91 m) downstream from bridge on Essex Road, 300 ft (91 m) north of State Highway 26 (Liberty Road), in Villa Nova, 1.1 mi (1.8 km) west of Baltimore city limits, and 11.5 mi (18.5 km) upstream from mouth.

DRAINAGE AREA.--32.5 mi^2 (84.2 km^2).

PERIOD OF RECORD.--February 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 361.32 ft (110.130 m) above mean sea level (Baltimore County bench mark). Prior to Aug. 27, 1963, and Oct. 25, 1972, to Sept. 20, 1973, water-stage recorder, and June 26, 1972, to Oct. 24, 1972, nonrecording gage at site 300 ft (91 m) upstream at same datum.

REMARKS.--Records good. Slight diurnal fluctuation at times from unknown source above station. Small diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 36.3 ft^3/s (1.028 m^3/s), 15.17 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft^3/s (459 m^3/s) June 22, 1972, gage height, 21.5 ft (6.55 m), from floodmarks, from rating curve extended above 2,200 ft^3/s (62.3 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 1.7 ft^3/s (0.048 m^3/s) Sept. 7, 8, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 21, 1956, reached a stage of 12.6 ft (3.84 m), discharge, 5,270 ft^3/s (149 m^3/s) on basis of contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft^3/s (21 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 3	0915	*1070	30.3	5.05	1.539	Mar. 22	1330	997	28.2	4.86	1.481
Mar. 13	2230	815	23.1	4.35	1.326	Apr. 5	0245	997	28.2	4.86	1.481

Minimum discharge, 6.6 ft^3/s (0.19 m^3/s) Sept. 12, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	37	19	16	15	22	23	23	16	14	10	15
2	248	27	19	16	15	20	230	23	24	13	10	9.5
3	432	25	18	16	15	19	70	23	15	12	11	8.9
4	55	24	18	16	16	58	141	29	13	12	11	8.8
5	32	23	18	16	17	40	466	28	12	12	10	8.5
6	26	21	18	16	15	27	90	79	23	12	14	9.4
7	23	21	193	16	15	24	50	52	16	23	12	9.3
8	34	21	42	16	14	22	41	27	13	17	21	8.5
9	223	19	28	18	15	21	36	23	37	12	24	8.6
10	49	20	21	22	28	21	33	22	17	13	38	10
11	32	19	21	18	75	20	32	22	13	32	29	8.4
12	26	19	22	17	40	20	30	20	12	23	30	7.7
13	24	19	19	16	36	304	29	19	12	14	15	7.6
14	22	19	18	18	30	120	28	19	12	12	24	7.6
15	19	19	19	19	26	40	27	17	15	11	16	7.5
16	19	19	19	18	22	30	26	17	12	11	12	8.3
17	24	18	19	16	19	25	25	17	56	22	101	10
18	22	19	18	16	17	48	25	19	72	50	31	9.0
19	18	19	17	16	18	31	25	24	17	14	17	14
20	184	18	21	16	19	34	25	16	22	36	14	25
21	106	18	20	16	17	31	25	15	20	14	13	9.4
22	30	18	18	16	16	382	26	13	14	11	23	8.4
23	23	17	18	16	17	73	26	15	13	10	14	8.8
24	31	17	17	16	97	40	37	14	12	10	17	8.7
25	47	18	17	18	61	32	61	22	12	48	17	9.4
26	83	18	20	17	30	29	39	17	13	26	13	11
27	30	18	19	16	27	26	26	14	12	11	12	11
28	24	18	19	16	25	36	28	14	73	10	12	15
29	23	48	19	16	---	31	35	13	85	10	11	8.8
30	24	22	19	15	---	27	25	13	18	17	11	8.1
31	141	---	17	15	---	24	---	14	---	12	13	---
TOTAL	2127	638	790	515	757	1677	1780	683	701	544	614	300.2
MEAN	68.6	21.3	25.5	16.6	27.0	54.1	59.3	22.0	23.4	17.5	19.8	10.0
MAX	432	48	193	22	97	382	466	79	85	50	101	25
MIN	18	17	17	15	14	19	23	13	12	10	10	7.5
CFSM	2.11	.66	.79	.51	.83	1.67	1.83	.68	.72	.54	.61	.31
IN.	2.43	.73	.90	.59	.87	1.92	2.04	.78	.80	.62	.70	.34

CAL YR 1976 TOTAL 15054.3 MEAN 41.1 MAX 852 MIN 8.7 CFSM 1.27 IN 17.23
WTR YR 1977 TOTAL 11126.2 MEAN 30.5 MAX 466 MIN 7.5 CFSM .94 IN 12.73

01589330 DEAD RUN AT FRANKLINTOWN, MD

LOCATION.--Lat 39°18'40", long 76°43'02", Baltimore County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Colonial Road at Security Boulevard at Franklintown, 0.3 mi (0.5 km) west of Baltimore city limits, 1.2 mi (1.9 km) southwest of Woodlawn, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--5.52 mi^2 (14.30 km^2).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 310 ft (94 m), from topographic map.

REMARKS.--Records good. Occasional regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 7.24 ft^3/s (0.205 m^3/s), 17.81 in/yr (452 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft^3/s (210 m^3/s) June 22, 1972, gage height, 12.5 ft (3.81 m), from floodmarks, from rating curve extended above 1,600 ft^3/s (45.3 m^3/s) on basis of contracted-opening measurement of peak flow at bridge 0.6 mi (1.0 km) downstream, adjusted for flow from intervening area; minimum, 0.10 ft^3/s (0.003 m^3/s) Sept. 11-12, 1966, gage height, 0.57 ft (0.174 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 650 ft^3/s (18 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 2	1745	*1240	35.1	5.80	1.768
Oct. 20	1830	933	26.4	4.91	1.497
June 17	2030	655	18.5	3.95	1.204
Aug. 17	1500	725	20.5	4.21	1.283

Minimum discharge, 0.28 ft^3/s (0.008 m^3/s) Jan. 23, result of freezeup.

DISCHANGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	4.3	1.2	1.0	1.5	2.0	1.9	1.5	1.6	1.1	.85	.88
2	160	2.9	1.3	1.1	2.0	1.7	67	1.5	1.5	.97	.84	.76
3	92	2.6	1.0	1.2	2.7	1.6	9.1	1.6	1.1	.86	.88	.57
4	6.4	2.4	1.0	1.2	3.5	10	75	3.6	.96	.83	.82	.50
5	2.9	2.1	1.0	.96	2.5	3.3	72	7.4	.99	.89	14	.50
6	2.3	1.9	1.2	.91	1.7	2.2	11	10	8.2	.98	2.3	6.1
7	2.0	1.9	76	1.4	3.7	1.9	4.7	2.5	1.3	9.8	.84	1.1
8	4.4	1.8	4.2	1.0	9.5	1.6	3.7	1.6	.99	1.2	5.1	.74
9	70	1.8	2.2	1.1	12	1.6	3.0	1.8	20	1.1	1.7	2.4
10	4.6	1.9	1.9	13	41	1.6	2.7	1.4	1.9	.96	12	1.3
11	2.6	1.7	2.0	1.8	32	1.5	2.6	1.3	1.1	5.9	2.7	.54
12	2.2	1.5	2.2	1.5	18	1.4	2.7	1.4	.97	1.6	.88	.52
13	2.5	1.4	1.7	1.3	6.0	91	2.5	1.2	.99	1.4	.88	.56
14	2.1	1.4	1.5	1.0	2.6	12	2.3	2.1	1.0	.99	6.5	.70
15	1.5	1.4	1.5	7.0	2.1	4.0	2.2	1.1	1.6	.91	1.0	.64
16	1.4	1.4	1.7	1.8	1.5	3.0	2.1	1.1	1.2	.78	.88	2.4
17	5.5	1.4	1.8	1.5	1.3	2.4	2.1	1.2	36	26	43	1.2
18	1.6	1.4	1.4	1.3	1.3	19	1.9	1.6	10	3.8	1.3	.63
19	1.5	1.4	1.3	1.2	1.3	3.3	1.9	1.8	1.6	1.1	.72	5.5
20	122	1.4	6.6	1.1	1.4	8.0	1.9	1.2	3.3	9.0	.62	2.2
21	13	1.4	2.8	1.0	1.2	3.1	1.8	1.1	1.4	1.2	.56	.76
22	3.1	1.4	1.2	1.0	1.2	121	1.9	1.1	1.1	1.0	7.3	.88
23	2.4	1.3	1.2	1.5	1.4	7.9	1.9	1.1	1.2	1.1	.69	1.0
24	12	1.2	1.1	2.0	35	3.6	12	1.3	1.0	.91	4.9	.88
25	30	1.2	1.1	3.1	5.4	2.7	7.8	7.3	1.0	9.9	.87	.76
26	32	1.2	3.9	2.4	2.9	2.4	3.6	1.5	.99	1.8	.60	1.0
27	3.3	1.7	1.4	1.9	3.0	2.1	1.8	1.2	.98	.86	.64	1.4
28	2.7	1.9	1.5	2.1	2.6	6.2	4.3	1.1	13	.83	.63	2.5
29	2.5	16	1.4	1.5	---	2.5	3.6	1.1	2.4	.85	.63	.65
30	7.1	1.4	1.3	1.0	---	2.3	1.6	1.0	1.1	6.7	1.1	.65
31	71	---	1.1	1.2	---	2.1	---	1.2	---	.92	.88	---
TOTAL	676.0	66.7	130.7	61.07	200.3	329.0	312.6	65.9	120.47	96.24	116.61	40.22
MEAN	21.8	2.22	4.22	1.97	7.15	10.6	10.4	2.13	4.02	3.10	3.76	1.34
MAX	160	16	76	13	41	121	75	10	36	26	43	6.1
MIN	1.4	1.2	1.0	.91	1.2	1.4	1.6	1.0	.96	.78	.56	.50
CFSM	3.95	.40	.76	.36	1.30	1.92	1.88	.39	.73	.56	.68	.24
IN.	4.55	.45	.88	.41	1.35	2.22	2.11	.44	.81	.65	.79	.27

CAL YR 1976 TOTAL 3348.05 MEAN 9.15 MAX 310 MIN .72 CFSM 1.66 IN 22.56
WTR YR 1977 TOTAL 2215.81 MEAN 6.07 MAX 160 MIN .50 CFSM 1.10 IN 14.93

01589440 JONES FALLS AT SORRENTO, MD

LOCATION.--Lat 39°23'30", long 76°39'42", Baltimore County, Hydrologic Unit 02060003, on right bank 0.3 mi (0.5 km) downstream from bridge on State Highway 25 (Falls Road), 0.4 mi (0.6 km) downstream from Slaughterhouse Branch and Sorrento, and 18 mi (29 km) upstream from mouth.

DRAINAGE AREA.--25.2 mi² (65.3 km²).

PERIOD OF RECORD.--Annual maximum, water years 1958-66. April 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 240 ft (73 m), from topographic map. January 1958 to April 1966, nonrecording gage at site 450 ft (140 m) upstream at same datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 33.0 ft³/s (0.935 m³/s), 17.78 in/yr (452 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft³/s (391 m³/s) June 22, 1972, gage height, 18.11 ft (5.520 m), from floodmarks, from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.8 ft³/s (0.051 m³/s) Sept. 7, 8, 1966, gage height, 1.16 ft (0.354 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 757 ft³/s (21.4 m³/s) Oct. 3, gage height, 6.82 ft (2.079 m), no other peak above base of 600 ft³/s (17 m³/s); minimum, 5.2 ft³/s (0.15 m³/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	32	19	15	14	19	23	27	17	12	9.3	7.3
2	136	28	20	16	14	17	120	26	18	12	9.3	7.0
3	300	26	18	16	14	17	57	26	14	11	9.5	6.3
4	45	26	18	17	15	29	67	28	13	10	11	6.6
5	30	25	18	16	16	27	254	29	13	10	9.5	6.6
6	26	24	17	16	14	23	72	52	18	9.4	9.1	8.2
7	24	23	90	17	14	21	48	35	16	12	8.9	7.8
8	25	22	30	16	13	19	41	26	13	11	9.4	7.1
9	103	21	23	17	13	18	36	24	22	10	12	7.0
10	34	22	22	20	19	18	34	23	17	9.9	14	8.2
11	27	21	22	17	41	17	32	22	15	12	14	7.2
12	24	21	23	16	30	17	30	21	14	13	13	6.5
13	23	21	21	15	30	123	29	21	13	11	11	5.8
14	22	21	19	17	23	76	28	20	12	9.7	15	5.6
15	21	21	20	18	21	35	27	19	14	8.8	12	5.9
16	20	20	20	17	18	29	26	18	13	8.5	9.9	6.3
17	22	20	20	15	16	26	26	17	25	12	32	8.6
18	21	20	19	16	15	36	25	18	30	24	16	7.6
19	19	20	19	16	16	28	25	19	15	12	11	7.0
20	119	20	21	17	17	29	24	17	16	18	9.9	9.6
21	70	20	21	16	15	27	23	17	14	11	8.9	6.9
22	30	19	16	16	14	181	23	16	12	9.1	11	7.0
23	27	19	18	16	15	60	24	16	11	8.3	9.1	7.2
24	29	18	16	16	57	38	35	14	11	8.5	9.4	7.2
25	33	19	16	18	34	32	39	19	11	25	9.2	7.2
26	47	19	19	17	23	30	35	18	11	16	8.3	7.7
27	28	19	18	16	22	29	29	15	10	11	8.3	7.7
28	26	19	18	16	21	31	29	15	55	9.7	8.3	8.5
29	25	27	18	16	---	28	32	15	38	9.2	7.6	6.9
30	25	21	18	15	---	26	28	15	14	12	7.0	6.8
31	86	---	17	15	---	24	---	15	---	10	7.5	---
TOTAL	1500	654	674	507	574	1130	1321	663	515	366.1	340.4	215.3
MEAN	48.4	21.8	21.7	16.4	20.5	36.5	44.0	21.4	17.2	11.8	11.0	7.18
MAX	300	32	90	20	57	181	254	52	55	25	32	9.6
MIN	19	18	16	15	13	17	23	14	10	8.3	7.0	5.6
CFSM	1.92	.87	.86	.65	.81	1.45	1.75	.85	.68	.47	.44	.29
IN.	2.21	.97	.99	.75	.85	1.67	1.95	.98	.76	.54	.50	.32

CAL YR 1976 TOTAL 12193.0 MEAN 33.3 MAX 425 MIN 9.3 CFSM 1.32 IN 18.00
WTR YR 1977 TOTAL 8459.8 MEAN 23.2 MAX 300 MIN 5.6 CFSM .92 IN 12.49

01590500 BACON RIDGE BRANCH AT CHESTERFIELD, MD

LOCATION.--Lat 39°00'07", long 76°36'53", Anne Arundel County, Hydrologic Unit 02060004, on left bank 50 ft (15 m) downstream from highway bridge, 0.5 mi (0.8 km) east of Chesterfield, 1.4 mi (2.3 km) upstream from confluence with North River, and 6.8 mi (10.9 km) northwest of Annapolis.

DRAINAGE AREA.--6.92 mi² (17.92 km²).

PERIOD OF RECORD.--October 1942 to September 1952. Annual maximum, water years 1965-74. October 1974 to current year. Monthly discharge only October and November 1942, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

REMARKS.--Records good. Records include sewage from Crownsville State Hospital, which obtains its water supply from wells. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1943-52, 1975-77), 9.77 ft³/s (0.277 m³/s), 19.17 in/yr (487 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Aug. 2, 1944, gage height, 5.49 ft (1.673 m), from rating curve extended above 140 ft³/s (3.96 m³/s) on basis of velocity-area studies; minimum, 2.3 ft³/s (0.065 m³/s) Aug. 30, 1975, gage height, 1.72 ft (0.524 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 58.9 ft³/s (1.67 m³/s) Oct. 21, gage height, 2.49 ft (0.759 m), no peak above base of 185 ft³/s (5.2 m³/s); minimum, 1.5 ft³/s (0.042 m³/s) part of each day July 2-7, 16, 17, gage height, 1.72 ft (0.524 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	5.5	4.1	4.8	7.1	6.1	6.5	3.6	2.1	5.6	2.2
2	20	9.7	5.8	4.1	4.8	6.6	15	6.2	3.3	2.0	11	2.2
3	33	8.8	5.1	4.1	4.8	6.2	18	5.9	3.0	1.7	3.6	2.1
4	10	8.3	4.7	4.4	4.8	6.7	11	6.9	2.7	1.7	3.1	2.2
5	7.1	7.6	4.9	4.9	4.8	7.7	18	11	2.7	1.9	2.8	2.9
6	6.1	7.1	4.9	4.8	4.8	7.7	13	14	6.3	1.9	2.6	5.2
7	5.4	6.9	24	5.4	4.8	7.3	10	20	4.7	1.9	2.6	3.1
8	5.2	6.7	22	5.3	4.8	6.7	9.5	8.3	3.3	2.1	2.6	2.6
9	25	6.3	8.0	5.2	4.8	6.6	8.8	6.0	8.7	2.0	2.8	2.7
10	19	6.6	7.2	7.3	6.0	6.6	8.8	5.5	6.3	1.9	2.7	3.2
11	7.8	6.2	7.8	9.9	10	6.6	8.8	5.1	3.9	2.3	2.5	2.5
12	6.2	6.3	8.8	9.0	11	6.6	8.5	4.8	3.3	3.7	2.4	2.3
13	5.7	6.2	7.5	7.0	12	12	8.2	4.6	2.9	7.7	2.5	2.4
14	5.5	6.1	5.6	6.4	10	15	8.2	4.4	3.0	2.8	2.9	2.2
15	5.2	6.1	6.2	6.0	9.0	8.7	7.7	4.0	3.3	2.2	2.9	2.2
16	4.9	6.1	6.8	5.5	7.5	8.0	7.7	3.8	3.3	2.0	2.5	2.3
17	5.8	5.9	7.1	5.5	6.0	7.1	7.1	3.9	3.5	2.2	2.5	2.7
18	6.3	6.1	6.3	5.5	6.0	9.0	7.1	3.7	15	16	2.4	2.5
19	5.0	6.1	5.9	5.5	6.0	9.1	7.1	3.6	4.5	4.0	2.2	2.4
20	12	6.1	6.7	5.5	6.0	7.1	7.1	3.5	3.7	3.9	2.1	2.1
21	37	5.9	8.5	5.5	5.5	7.1	7.1	3.4	4.1	3.2	2.0	2.0
22	11	6.1	5.1	5.5	5.5	19	7.0	3.2	3.2	2.7	2.1	2.3
23	7.4	5.6	5.4	5.5	5.5	24	6.6	3.2	2.9	2.1	2.2	2.2
24	7.2	5.5	5.0	5.5	10	11	8.3	3.2	2.9	2.0	5.5	2.3
25	10	5.8	4.7	5.5	14	9.0	16	4.9	2.9	1.9	9.2	2.5
26	37	5.6	10	5.6	9.5	8.4	11	4.5	3.0	4.2	3.0	2.6
27	16	5.6	7.1	5.6	9.2	8.2	7.8	3.6	2.5	2.5	2.5	2.6
28	9.9	5.6	6.1	5.6	9.5	8.9	7.2	3.3	2.6	2.2	2.5	2.5
29	8.4	11	6.1	5.6	---	8.8	8.4	3.0	2.5	2.2	2.4	2.4
30	7.9	8.2	4.8	5.2	---	7.3	7.0	3.1	2.2	4.4	2.3	2.2
31	23	---	4.8	4.8	---	6.8	---	3.3	---	3.2	2.3	---
TOTAL	387.0	210.1	228.4	175.3	201.4	276.9	282.1	170.4	119.8	96.6	100.3	75.6
MEAN	12.5	7.00	7.37	5.65	7.19	8.93	9.40	5.50	3.99	3.12	3.24	2.52
MAX	37	16	24	9.9	14	24	18	20	15	16	11	5.2
MIN	4.9	5.5	4.7	4.1	4.8	6.2	6.1	3.0	2.2	1.7	2.0	2.0
CFSM	1.81	1.01	1.07	.82	1.04	1.29	1.36	.80	.58	.45	.47	.36
IN.	2.08	1.13	1.23	.94	1.08	1.49	1.52	.92	.64	.52	.54	.41

CAL YR 1976 TOTAL 3250.2 MEAN 8.88 MAX 134 MIN 3.0 CFSM 1.28 IN 17.47
WTR YR 1977 TOTAL 2323.9 MEAN 6.37 MAX 37 MIN 1.7 CFSM .92 IN 12.49

01591000 PATUXENT RIVER NEAR UNITY, MD

LOCATION.--Lat 39°14'18", long 77°03'23", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 97, 0.6 mi (1 km) upstream from Cattail Creek, 0.8 mi (1.3 km) upstream from Triadelphia Reservoir, 1.1 mi (1.8 km) northeast of Unity, and 97 mi (155 km) upstream from mouth.

DRAINAGE AREA.--34.8 mi^2 (90.1 km^2).

PERIOD OF RECORD.--July 1944 to current year.

REVISED RECORDS.--WSP 1111: 1947. WSP 1432: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 364.76 ft (111.179 m) above mean sea level (Washington Suburban Sanitary Commission bench mark). Prior to Aug. 14, 1946, non-recording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 38.4 ft^3/s (1.087 m^3/s), 14.98 in/yr (380 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft^3/s (595 m^3/s) Sept. 11, 1971, gage height, 18.60 ft (5.669 m), from rating curve extended above 1,500 ft^3/s (42.5 m^3/s) on basis of slope-area measurement at gage height 13.00 ft (3.962 m); minimum, 0.20 ft^3/s (0.006 m^3/s) Sept. 10, 11, 12, 1966, gage height, 1.66 ft (0.506 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft^3/s (32.9 m^3/s) Oct. 9, gage height, 6.41 ft (1.954 m), no other peak above base of 770 ft^3/s (21 m^3/s); minimum, 2.8 ft^3/s (0.079 m^3/s) Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	52	26	17	18	24	30	29	19	13	6.7	6.5
2	50	43	25	17	18	22	100	28	24	12	6.7	6.2
3	100	40	24	17	18	21	72	28	17	10	6.6	5.5
4	40	39	22	19	20	35	97	30	15	10	4.6	5.5
5	24	36	21	18	20	38	310	42	17	11	4.7	5.2
6	20	34	21	18	16	30	123	121	26	9.6	4.8	5.2
7	19	33	123	19	16	27	119	76	20	9.2	6.6	4.9
8	36	32	56	18	16	24	85	48	16	10	7.7	4.6
9	380	30	37	18	16	22	72	37	42	13	19	4.6
10	75	31	33	20	30	22	62	34	29	12	9.3	5.5
11	36	29	33	18	100	21	70	32	21	12	20	4.6
12	30	29	34	16	80	21	64	29	19	13	11	4.0
13	26	28	31	16	60	117	62	27	18	13	8.5	3.8
14	26	28	27	19	40	90	51	30	16	11	10	3.6
15	25	28	28	21	32	51	44	25	18	9.6	10	3.6
16	22	27	28	19	28	41	54	24	18	9.6	7.2	4.3
17	24	26	27	18	24	34	103	23	16	19	23	5.3
18	24	27	26	20	20	39	118	24	28	53	16	4.9
19	22	26	25	22	21	33	35	27	20	11	9.0	5.6
20	89	25	26	24	21	35	34	22	34	14	7.0	13
21	87	25	26	22	19	34	34	20	32	11	7.6	6.5
22	43	25	23	20	19	174	33	23	19	8.9	12	5.9
23	35	24	23	20	20	93	32	25	17	8.3	9.3	6.2
24	39	23	21	20	39	61	32	21	14	7.8	8.1	6.2
25	52	24	20	22	45	50	35	20	14	9.2	7.6	6.5
26	68	24	23	20	32	44	36	19	15	16	7.6	6.9
27	45	25	23	20	30	40	32	16	13	8.4	7.6	6.9
28	39	24	22	20	28	44	31	15	14	7.5	7.6	7.2
29	36	40	22	20	---	42	34	15	21	6.8	7.2	6.2
30	35	29	24	18	---	37	30	16	14	8.8	7.2	5.7
31	93	---	19	18	---	32	---	19	---	8.3	7.2	---
TOTAL	1676	906	919	594	846	1398	2034	945	606	376.0	287.4	170.6
MEAN	54.1	30.2	29.6	19.2	30.2	45.1	67.8	30.5	20.2	12.1	9.27	5.69
MAX	380	52	123	24	100	174	310	121	42	53	23	13
MIN	19	23	19	16	16	21	30	15	13	6.8	4.6	3.6
CFSM	1.56	.87	.85	.55	.87	1.30	1.95	.88	.58	.35	.27	.16
IN.	1.79	.97	.98	.63	.90	1.49	2.17	1.01	.65	.40	.31	.18

CAL YR 1976 TOTAL 15762.0 MEAN 43.1 MAX 770 MIN 7.6 CFSM 1.24 IN 16.85
WTR YR 1977 TOTAL 10758.0 MEAN 29.5 MAX 380 MIN 3.6 CFSM .85 IN 11.50

01592500 PATUXENT RIVER NEAR LAUREL, MD

LOCATION.--Lat 39°06'56", long 76°52'27", Prince Georges County, Hydrologic Unit 02060006, on right bank at Rocky Gorge pumping station, 600 ft (180 m) downstream from T. Howard Duckett Reservoir, 0.7 mi (1.1 km) upstream from Walker Branch, 1.3 mi (2.1 km) northwest of Laurel, and 81 mi (130 km) upstream from mouth.

DRAINAGE AREA.--132 mi² (342 km²).

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 153.5 ft (46.79 m) above mean sea level (levels by Washington Suburban Sanitary Commission). Prior to Oct. 1, 1955, water-stage recorder and concrete control at site 0.3 mi (0.5 km) downstream at different datum. Oct. 1, 1955, to Sept. 30, 1956, nonrecording gage at present site at datum 1.2 ft (0.37 m) lower. Oct. 1, 1956, to Jan. 27, 1957, nonrecording gage at present site and datum. Jan. 28, 1957, to May 3, 1972, water-stage recorder and concrete control at present site and datum. May 4, 1972, to Sept. 4, 1973, nonrecording gage at present site and datum.

REMARKS.--Records good. Records do not include diversion at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Flow regulated by Triadelphia Reservoir, and since March 1954 by T. Howard Duckett Reservoir, combined usable capacity, 12,500,000,000 gal (47.31 hm³); dead storage, 80,000,000 gal (302,800 m³). Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 26,000 ft³/s (736 m³/s) June 22, 1972, gage height, about 25 ft (7.6 m), from floodmarks, from rating curve extended above 6,600 ft³/s (187 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.10 ft³/s (0.003 m³/s) Sept. 25, 1964, (valve closed for repair); minimum daily, 1.1 ft³/s (0.031 m³/s) June 26, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 981 ft³/s (27.8 m³/s) Apr. 6, gage height, 8.15 ft (2.484 m); minimum daily, 11 ft³/s (0.31 m³/s) Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	66	29	29	23	20	31	29	26	27	26	16
2	14	65	30	29	23	20	31	29	26	27	26	16
3	14	45	30	30	23	20	123	29	26	27	25	17
4	14	23	29	30	22	18	479	29	26	27	26	17
5	14	24	29	30	21	18	964	29	26	27	26	17
6	14	25	29	30	22	18	799	29	26	26	27	17
7	24	25	48	30	22	18	135	29	25	26	27	17
8	16	25	275	30	21	18	80	30	26	26	28	17
9	15	25	123	30	22	18	79	29	26	25	27	17
10	15	24	33	30	21	18	79	29	25	26	27	17
11	14	23	33	30	21	18	80	29	26	26	27	17
12	13	23	32	30	21	18	75	28	26	26	28	17
13	20	23	32	30	21	19	76	29	26	25	29	17
14	20	23	32	30	21	19	80	28	26	26	29	16
15	18	23	32	30	21	19	81	29	26	25	28	17
16	15	24	32	30	20	19	81	29	26	26	28	18
17	14	24	32	30	19	19	79	29	26	26	29	18
18	13	23	32	30	20	19	53	29	26	27	29	18
19	12	24	32	30	20	19	31	29	26	26	30	18
20	12	23	30	30	19	19	31	28	26	26	30	18
21	11	23	29	28	19	19	30	28	26	26	29	18
22	17	23	29	26	20	43	30	28	25	22	29	18
23	18	23	29	25	19	183	29	28	26	22	28	16
24	18	23	29	23	20	213	30	28	72	22	29	16
25	18	23	29	23	20	165	30	27	26	24	26	16
26	17	25	29	23	20	81	29	27	26	25	18	16
27	18	28	29	23	20	80	29	28	26	25	17	16
28	20	28	29	23	20	31	29	27	26	26	16	15
29	37	29	29	23	---	30	28	26	26	26	16	15
30	66	29	29	23	---	30	29	26	27	25	16	18
31	66	---	29	23	---	30	---	26	---	25	16	---
TOTAL	611	834	1293	861	581	1279	3760	877	824	791	792	506
MEAN	19.7	27.8	41.7	27.8	20.8	41.3	125	28.3	27.5	25.5	25.5	16.9
MAX	66	66	275	30	23	213	964	30	72	27	30	18
MIN	11	23	29	23	19	18	28	26	25	22	16	15
(≠)	11860	11780	11710	11070	11180	12110	11880	11580	10770	9640	8930	7890
(*)	80.2	78.6	78.5	87.3	83.0	87.7	86.1	82.6	74.7	76.5	53.0	52.1

CAL YR 1976 TOTAL 31020 MEAN 84.8 MAX 2110 MIN 11 (*) 77.0
WTR YR 1977 TOTAL 13009 MEAN 35.6 MAX 964 MIN 11 (*) 76.7

≠ Combined month-end total contents, million of gallons, in Triadelphia and T. Howard Duckett Reservoirs, contents on Sept. 30, 1976: 9,930,000,000 gal (37.59 hm³); furnished by Washington Suburban Sanitary Commission.

* Diversion, in cubic feet per second, above station at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Records furnished by Washington Suburban Sanitary Commission.

01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD

LOCATION.--Lat 39°10'04", long 76°51'07", Howard County, Hydrologic Unit 02060006, on left bank 75 ft (23 m) upstream from bridge on State Highway 32, 1 mi (1.6 km) west of Guilford, 3 mi (4.8 km) upstream from Middle Patuxent River, 4 mi (6.4 km) north of Laurel, and 20.1 mi (32.3 km) upstream from mouth.

DRAINAGE AREA.--38.0 mi² (98.4 km²).

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for April 1932, published in WSP 1302.

REVISED RECORDS.--WSP 1502: 1933, 1934(M), 1939(M), 1945(M), 1948(P).

GAGE.--Water-stage recorder. Concrete control since June 20, 1946. Altitude of gage is 260 ft (79.2 m), from topographic map. Prior to June 25, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good. Low flow affected by regulation from unknown source. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 41.9 ft³/s (1.187 m³/s), 14.98 in/yr (380 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s (351 m³/s) June 22, 1972, gage height, 18.38 ft (5.602 m), from high-water mark in well, from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of contracted-opening measurement at gage height 13.26 ft (4.042 m) and contracted-opening and flow-over-embankment measurement at gage height 18.38 ft (5.602 m); no flow Sept. 8, and parts of Sept. 6, 7, 9-12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 754 ft³/s (21.4 m³/s) Mar. 22, gage height, 7.02 ft (2.140 m), no peak above base of 800 ft³/s (22 m³/s); minimum, 3.5 ft³/s (0.099 m³/s) Sept. 14, 30, gage height, 2.48 ft (0.756 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	60	27	22	15	26	27	26	15	9.3	7.5	7.6
2	147	41	25	19	15	24	108	25	15	8.7	7.2	6.8
3	258	38	28	18	15	22	84	24	13	7.9	6.5	6.1
4	62	35	35	21	18	31	70	27	12	7.5	6.5	5.5
5	34	32	29	20	19	37	310	31	13	8.4	6.2	5.8
6	27	30	27	20	18	30	109	117	20	8.2	8.9	6.1
7	24	29	207	23	16	27	59	90	21	11	12	6.1
8	25	28	75	22	16	25	48	36	15	13	7.6	5.0
9	170	27	37	24	16	23	42	27	52	9.9	17	4.8
10	70	28	32	28	17	23	38	26	41	9.4	23	6.3
11	34	27	32	32	80	22	37	23	18	25	20	5.8
12	28	26	35	28	120	22	35	22	15	33	11	4.2
13	25	26	32	18	60	193	33	21	14	16	9.0	4.0
14	25	26	27	19	35	169	32	20	13	11	47	3.9
15	21	26	27	24	27	53	30	20	15	8.6	26	4.0
16	21	25	28	22	23	38	29	19	15	7.8	11	5.0
17	24	25	28	16	25	30	29	19	25	30	40	6.8
18	25	26	26	17	22	55	28	18	60	94	43	5.8
19	21	24	25	16	20	49	28	19	19	18	13	4.8
20	173	24	28	16	20	42	27	18	36	23	9.5	7.9
21	202	23	41	17	19	42	27	18	34	15	8.4	6.5
22	43	24	30	16	18	339	27	16	15	10	13	4.8
23	32	22	25	15	19	114	26	16	13	8.0	9.8	5.6
24	36	21	24	16	45	51	29	16	12	7.5	14	5.1
25	63	22	22	18	74	39	52	23	12	8.4	17	5.0
26	157	23	28	19	33	35	33	24	13	17	9.4	5.8
27	48	25	28	18	30	32	27	18	11	9.0	8.0	6.4
28	38	24	25	18	32	37	27	16	11	7.3	7.5	6.8
29	34	53	26	17	---	38	33	15	14	6.8	7.0	5.8
30	32	34	29	15	---	33	26	14	11	13	13	4.2
31	184	---	24	15	---	31	---	15	---	9.6	12	---
TOTAL	2135	874	1112	609	867	1732	1510	817	593	471.3	451.0	168.3
MEAN	68.9	29.1	35.9	19.6	31.0	55.9	50.3	26.4	19.8	15.2	14.5	5.61
MAX	258	60	207	32	120	339	310	117	60	94	47	7.9
MIN	21	21	22	15	15	22	26	14	11	6.8	6.2	3.9
CFSM	1.81	.77	.95	.52	.82	1.47	1.32	.70	.52	.40	.38	.15
IN.	2.09	.86	1.09	.60	.85	1.70	1.48	.80	.58	.46	.44	.16

CAL YR 1976 TOTAL 16601.0 MEAN 45.4 MAX 1120 MIN 7.5 CFSM 1.20 IN 16.25
WTR YR 1977 TOTAL 11339.6 MEAN 31.1 MAX 339 MIN 3.9 CFSM .82 IN 11.10

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD

LOCATION.--Lat 39°08'00", long 76°48'58", Howard County, Hydrologic Unit 02060006, on left bank 500 ft (150 m) downstream from bridge on U.S. Highway 1, 0.5 mi (0.8 km) southeast of Savage, 1.0 mi (1.6 km) downstream from Middle Patuxent River, and 16.1 mi (25.9 km) upstream from mouth.

DRAINAGE AREA.--98.4 mi^2 (254.9 km^2).

PERIOD OF RECORD.--October 1939 to September 1958. Annual maximum, water years 1959-66, 68, 72. October 1975 to current year. Prior to December 1939 monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder. Altitude of gage is 125 ft (38.1 m), from topographic map. Prior to 1958, water-stage recorder at site 100 ft (30 m) upstream at same datum. October 1958 to September 1972, crest-stage gage 100 ft (30 m) upstream on right bank at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Some diurnal fluctuation at low flow caused by plant 0.5 mi (0.8 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1940-58, 1976-77), 102 ft^3/s (2.889 m^3/s), 14.08 in/yr (358 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft^3/s (1,000 m^3/s) June 22, 1972; gage height, 25.4 ft (7.74 m), from floodmarks, from rating curve extended above 11,000 ft^3/s (312 m^3/s) on basis of contracted-opening measurement of peak flow; minimum daily, 7.0 ft^3/s (0.20 m^3/s) Sept. 19, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	2400	1610	45.6	6.97	2.124	Mar. 22	1730	*1960	55.5	7.53	2.295

Minimum discharge, 12 ft^3/s (0.34 m^3/s) Sept. 16, 17, 20, gage height, 2.50 ft (0.762 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	150	62	70	44	78	84	72	45	32	24	23
2	226	105	70	60	42	72	253	71	47	31	24	20
3	685	96	67	60	42	66	228	69	45	28	21	18
4	155	91	89	60	50	76	152	72	41	27	20	17
5	83	83	76	65	55	105	890	88	40	27	20	17
6	67	80	70	65	48	88	323	226	45	28	26	18
7	60	76	467	60	46	80	171	336	58	30	32	18
8	59	73	190	65	46	73	143	112	46	42	22	15
9	447	73	98	65	46	69	123	87	82	31	36	19
10	197	72	86	70	100	69	114	77	102	33	50	19
11	91	72	83	80	276	67	109	74	54	46	65	18
12	75	70	83	70	322	66	106	71	45	81	31	16
13	67	69	81	60	252	440	100	68	42	51	28	14
14	64	66	67	50	167	528	96	64	41	34	105	14
15	59	66	72	70	114	152	93	61	43	28	64	13
16	56	64	73	65	85	114	89	58	46	26	31	12
17	55	63	73	60	80	94	88	57	45	40	50	15
18	62	63	70	50	75	120	85	56	121	220	111	17
19	57	63	66	50	70	127	84	55	50	46	37	15
20	310	62	67	50	64	103	83	55	69	47	28	23
21	503	60	86	48	60	114	81	54	92	42	25	19
22	116	60	66	46	62	757	80	51	47	30	30	16
23	86	59	70	46	64	319	79	49	40	26	33	14
24	83	57	65	46	91	152	81	48	38	24	35	14
25	158	57	65	50	229	122	120	59	37	24	45	14
26	371	57	75	55	98	107	91	64	40	38	29	16
27	129	59	75	55	89	100	81	52	37	30	25	18
28	98	60	67	50	88	101	78	49	34	23	22	20
29	88	100	69	48	---	108	56	45	51	22	21	16
30	81	88	80	46	---	98	76	42	38	27	20	14
31	396	---	75	44	---	92	---	42	---	30	43	---
TOTAL	5084	2214	2803	1779	2805	4657	4267	2384	1561	1244	1153	502
MEAN	164	73.8	90.4	57.4	100	150	142	76.9	52.0	40.1	37.2	16.7
MAX	685	150	467	80	322	757	890	336	121	220	111	23
MIN	55	57	62	44	42	66	76	42	34	22	20	12
CFSM	1.67	.75	.92	.58	1.02	1.52	1.44	.78	.53	.41	.38	.17
IN.	1.92	.84	1.06	.67	1.06	1.76	1.61	.90	.59	.47	.44	.19

CAL YR 1976 TOTAL 44821 MEAN 122 MAX 2880 MIN 22 CFSM 1.24 IN 16.94
WTR YR 1977 TOTAL 30453 MEAN 83.4 MAX 890 MIN 12 CFSM .85 IN 11.51

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD

LOCATION.--Lat 39°18'07", long 79°18'26", Garrett County, Hydrologic Unit 02070002, on left bank 0.3 mi (0.5 km) southeast of Steyer, 0.4 mi (0.6 km) downstream from Steyer Run, 2.0 mi (3.2 km) northeast of Gorman, and at mile 81.8 (131.6 km).

DRAINAGE AREA.--73.0 mi^2 (189.1 km^2).

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,276.01 ft (693.728 m) above mean sea level.

REMARKS.--Records fair except those for winter periods, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 169 ft^3/s (4.786 m^3/s), 31.44 in/yr (799 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft^3/s (177 m^3/s) Mar. 5, 1963, gage height, 9.13 ft (2.783 m), from rating curve extended above 3,000 ft^3/s (85.0 m^3/s); minimum, 2.9 ft^3/s (0.082 m^3/s) Sept. 10, 1965, gage height, 2.03 ft (0.619 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1954, reached a stage of 13.0 ft (3.96 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,220 ft^3/s (91.2 m^3/s) Oct. 9, gage height, 6.96 ft (2.121 m), no other peak above base of 2,200 ft^3/s (62 m^3/s); minimum, 14 ft^3/s (0.40 m^3/s) July 24, 25, Sept. 10, gage height, 2.19 ft (0.668 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	459	90	56	31	456	174	62	38	44	23	23
2	245	311	105	54	30	317	351	57	33	41	20	21
3	368	248	80	52	33	250	382	51	30	36	19	22
4	151	212	74	52	35	1180	425	49	29	32	18	20
5	106	175	78	50	37	1130	1100	70	28	31	17	17
6	85	147	78	50	35	665	650	101	32	41	17	16
7	80	127	748	50	32	451	450	151	36	32	32	16
8	225	119	408	48	30	325	421	136	29	32	134	16
9	1760	111	250	48	28	273	308	98	182	38	64	16
10	1180	161	202	46	33	266	253	83	174	37	42	15
11	481	144	215	44	46	253	213	75	80	36	52	17
12	293	123	310	44	80	255	174	66	60	41	51	17
13	210	108	268	42	140	1050	150	61	46	163	111	20
14	173	99	203	42	230	525	135	128	46	81	257	24
15	139	99	182	41	170	365	120	78	57	46	179	29
16	135	93	164	41	110	284	105	65	42	39	96	26
17	114	83	145	40	95	230	91	58	36	32	133	28
18	96	85	123	40	100	355	85	54	46	26	103	23
19	82	84	108	40	105	321	76	165	36	22	71	21
20	169	88	116	40	90	288	76	97	41	20	57	64
21	418	81	112	38	80	256	84	74	93	17	49	39
22	227	82	90	37	95	455	73	65	48	19	45	27
23	170	76	84	36	300	407	66	107	38	17	45	23
24	279	74	78	35	1300	338	69	143	36	14	55	21
25	447	82	84	34	1140	268	72	82	64	79	62	20
26	513	107	90	34	981	235	64	66	104	112	41	32
27	324	174	80	33	1030	203	72	53	58	39	35	39
28	243	164	88	33	781	289	64	49	46	29	36	54
29	198	157	78	32	---	250	84	46	60	24	36	33
30	178	118	66	32	---	211	69	44	54	24	31	27
31	498	---	60	31	---	205	---	41	---	23	31	---
TOTAL	9785	4183	4857	1295	7197	12356	6456	2475	1702	1267	1962	766
MEAN	316	139	157	41.8	257	399	215	79.8	56.7	40.9	63.3	25.5
MAX	1760	459	748	56	1300	1180	1100	165	182	163	257	64
MIN	80	74	60	31	28	203	64	41	28	14	17	15
CFSM	4.33	1.90	2.15	.57	3.52	5.47	2.95	1.09	.78	.56	.87	.35
IN.	4.99	2.13	2.48	.66	3.67	6.30	3.29	1.26	.87	.65	1.00	.39

CAL YR 1976 TOTAL 57638.4 MEAN 157 MAX 1760 MIN 9.4 CFSM 2.15 IN 29.37
WTR YR 1977 TOTAL 54301.0 MEAN 149 MAX 1760 MIN 14 CFSM 2.04 IN 27.67

01595200 STONY RIVER NEAR MT. STORM, WV

LOCATION.--Lat 39°16'10", long 79°15'45", Grant County, Hydrologic Unit 02070002, on left bank 100 ft (30 m) downstream from highway bridge on U.S. Highway 50, 1.0 mi (1.6 km) west of Mt. Storm, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--48.8 mi^2 (126.4 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,554.54 ft (778.624 m) above mean sea level.

REMARKS.--Water-discharge records good except those for ice-affected days in December, January, and February, which are poor. Flow regulated by Stony River Reservoir, 14.0 mi (22.5 km) upstream from station, capacity, 1,948,000,000 gal (7.373 hm^3), of which 1,681,000,000 gal (6.363 hm^3) is controlled above minimum pool. Since 1963, minor regulation by Virginia Electric and Power Company dam 4.0 mi (6.4 km) upstream from station.

AVERAGE DISCHARGE.--16 years, 94.7 ft^3/s (2.682 m^3/s), 26.35 in/yr (669 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft^3/s (88.4 m^3/s) Mar. 19, 1963, from rating curve extended above 1,000 ft^3/s (28.3 m^3/s); maximum gage height, 8.41 ft (2.563 m) Mar. 5, 1963, ice jam; minimum discharge, 1.8 ft^3/s (0.051 m^3/s) July 13, 1968; minimum daily, 1.9 ft^3/s (0.054 m^3/s) July 13, 1968; minimum gage height, 1.82 ft (0.555 m), Sept. 11, 12, 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft^3/s (46.4 m^3/s) Oct. 9, gage height, 6.46 ft (1.969 m); minimum, 7.9 ft^3/s (0.22 m^3/s) Sept. 11, 12, 13, 14, gage height, 1.82 ft (0.555 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	194	60	28	22	435	95	19	27	15	9.8	9.2
2	96	162	56	27	23	304	128	18	26	14	9.7	8.5
3	136	150	47	28	19	230	131	18	23	13	9.6	8.9
4	50	146	43	28	19	449	180	19	20	13	9.4	9.0
5	66	137	41	29	20	408	565	21	18	12	9.3	8.7
6	72	124	39	29	18	319	454	22	19	13	9.8	8.6
7	90	110	144	28	18	273	387	31	19	12	20	8.4
8	302	99	101	28	19	233	355	28	16	12	33	8.8
9	1080	91	76	27	18	209	294	24	51	12	17	8.7
10	1240	94	71	26	22	194	252	23	48	12	13	8.4
11	821	81	85	22	31	182	215	21	29	12	12	8.0
12	391	75	118	22	39	197	180	20	24	13	12	8.1
13	308	68	107	23	71	630	159	22	22	22	20	8.0
14	135	62	95	25	60	427	88	55	30	14	29	8.9
15	124	59	94	28	55	387	36	29	33	12	21	9.0
16	118	56	94	28	47	351	33	25	25	11	14	8.8
17	102	52	91	27	45	308	31	21	23	11	19	9.2
18	89	51	81	25	51	315	30	21	21	10	16	8.6
19	80	50	78	24	54	290	27	49	18	10	12	8.4
20	129	52	79	23	50	273	27	34	22	10	11	12
21	177	47	79	22	44	239	26	29	31	10	10	9.4
22	122	47	73	21	51	273	24	26	20	11	11	8.7
23	108	43	65	21	110	239	25	49	16	9.7	10	8.7
24	137	41	57	21	435	203	24	49	15	9.4	14	8.5
25	180	43	52	21	363	175	23	36	32	23	13	8.5
26	224	52	50	22	343	146	22	33	34	23	10	9.9
27	167	71	48	23	458	73	22	32	21	12	12	10
28	148	68	46	22	476	96	21	30	19	11	14	12
29	133	73	43	21	---	99	23	31	21	11	10	9.7
30	131		35	21	---	92	20	31	16	11	9.4	8.9
31	206	---	30	21	---	101	---	31	---	10	9.3	---
TOTAL	7244	2462	2178	761	2981	8150	3897	897	739	394.1	429.3	270.5
MEAN	234	82.1	70.3	24.5	106	263	130	28.9	24.6	12.7	13.8	9.02
MAX	1240	194	144	29	476	630	565	55	51	23	33	12
MIN	50	41	30	21	18	73	20	18	15	9.4	9.3	8.0
(†)	1175	1164	1175	1175	1046	1197	1180	1186	1303	1303	1283	1219

CAL YR 1976 TOTAL 31182.0 MEAN 85.2 MAX 1240 MIN 8.0 CFSM 1.75 IN 23.77
WTR YR 1977 TOTAL 30402.9 MEAN 83.3 MAX 1240 MIN 8.0 CFSM 1.71 IN 23.18

† Month-end contents, in millions of gallons, in Stony River Reservoir, furnished by West Virginia Pulp and Paper Co.

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1961 to March 1974, September 1974 to current year.

INSTRUMENTATION.--Temperature recorder since December 1961.

REMARKS.--Temperature recorder clock stopped Oct. 1-6 (range in temperature 12.0 to 16.0°C).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 27°C July 1, Aug. 22, 23, 1968; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 24.0°C July 18, 20; minimum, 0.0°C on many days during February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	10.5	10.0	4.0	3.0	2.5	2.5	0.5	0.5	5.5	5.5
2	---	---	11.0	10.0	4.0	3.5	2.5	2.0	0.5	0.0	5.5	5.5
3	---	---	11.5	10.5	3.5	2.5	2.0	2.0	0.0	0.0	7.0	5.5
4	---	---	11.5	11.0	4.0	2.5	2.0	2.0	0.0	0.0	7.0	6.0
5	---	---	11.0	10.0	4.0	3.5	2.5	2.5	0.0	0.0	6.5	6.5
6	---	---	10.0	9.0	3.5	3.0	2.5	2.5	0.0	0.0	6.5	6.5
7	17.0	16.5	10.0	9.0	4.0	4.0	2.5	2.5	0.0	0.0	7.0	6.5
8	17.0	15.5	9.0	7.0	4.0	3.5	2.5	2.0	0.5	0.0	7.5	7.0
9	17.5	15.5	8.0	6.5	3.5	3.5	2.0	2.0	0.0	0.0	8.5	7.5
10	19.0	17.5	8.0	7.5	4.5	3.5	2.0	2.0	0.5	0.0	9.5	8.5
11	19.0	17.5	7.5	7.5	5.5	4.5	2.0	2.0	0.0	0.0	10.0	9.0
12	18.5	17.5	7.0	6.5	6.0	5.5	2.0	2.0	0.0	0.0	10.5	10.0
13	18.5	16.5	7.0	6.0	6.0	4.5	2.0	1.5	0.0	0.0	10.5	9.5
14	16.5	13.0	6.0	5.0	4.5	4.0	1.5	1.5	0.5	0.5	9.5	9.5
15	15.0	13.0	7.0	6.0	5.0	4.5	1.5	1.5	0.5	0.5	10.0	9.5
16	15.0	13.5	6.5	6.0	6.5	5.0	1.5	1.5	1.0	0.5	11.0	10.5
17	13.5	12.5	6.0	5.0	6.0	5.0	1.5	1.5	1.0	1.0	11.0	10.5
18	12.5	11.0	6.5	6.0	5.0	4.5	1.5	1.5	1.0	1.0	11.5	11.0
19	11.5	10.0	7.0	6.0	5.5	4.5	1.5	1.5	1.5	1.5	11.0	10.5
20	12.0	11.0	6.5	5.0	6.5	5.5	1.5	1.0	1.5	1.5	10.5	10.5
21	11.5	10.0	5.5	5.0	6.0	3.0	1.0	1.0	1.5	1.5	11.0	11.0
22	10.5	10.0	5.0	3.5	3.5	3.0	1.0	1.0	2.0	1.5	11.0	10.0
23	11.0	9.5	4.0	3.5	3.5	3.0	1.0	1.0	3.0	2.5	10.0	9.5
24	11.5	11.0	4.0	3.5	3.5	2.5	1.0	1.0	2.5	2.5	10.0	9.5
25	13.0	11.5	5.0	3.5	3.5	2.5	1.0	1.0	2.5	2.5	10.0	9.5
26	12.5	11.0	6.0	5.0	3.5	3.0	1.0	1.0	3.5	2.5	11.5	10.5
27	11.0	10.5	8.0	6.0	3.5	3.0	1.0	1.0	5.0	4.0	11.5	9.5
28	10.5	10.0	8.0	7.5	4.0	3.0	1.0	0.5	5.5	5.0	11.5	10.5
29	10.5	9.5	8.0	4.0	4.0	3.0	0.5	0.5	---	---	13.0	11.5
30	11.5	10.0	4.0	2.5	3.0	2.5	0.5	0.5	---	---	14.5	13.0
31	11.0	10.5	---	---	2.5	2.5	0.5	0.5	---	---	15.0	14.0
MONTH	19.0	9.5	11.5	2.5	6.5	2.5	2.5	0.5	5.5	0.0	15.0	5.5

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	13.5	15.0	10.0	21.0	19.0	20.0	19.0	20.0	18.5	22.5	18.0
2	13.5	13.0	15.0	13.5	19.0	16.0	19.5	18.0	20.0	16.5	23.0	19.0
3	13.5	13.0	16.5	13.0	19.0	15.5	19.0	17.0	20.0	17.5	22.5	20.0
4	13.5	12.5	16.0	15.0	19.0	13.0	19.0	18.0	20.5	17.0	21.0	18.0
5	13.5	12.5	17.5	14.5	17.0	15.5	21.5	19.0	20.5	17.5	21.0	19.0
6	13.5	13.5	19.0	16.0	18.0	15.5	23.0	20.0	21.0	19.5	21.0	19.0
7	13.5	13.0	17.0	15.0	15.5	12.0	23.5	21.0	21.0	20.0	21.0	19.5
8	13.5	13.5	15.5	11.0	15.0	10.0	23.0	21.0	21.0	21.0	20.0	19.0
9	14.0	13.5	13.0	9.0	14.0	11.5	22.5	21.0	21.0	21.0	19.0	17.5
10	14.5	13.5	11.0	8.0	14.0	11.0	21.0	19.0	21.0	21.0	18.5	17.0
11	16.5	15.0	12.0	8.0	16.0	11.5	21.5	19.5	21.0	20.5	17.0	15.0
12	17.5	16.5	14.0	9.0	17.5	13.0	21.5	20.0	21.0	21.0	15.5	12.0
13	18.0	16.0	17.0	12.0	19.0	15.5	21.5	20.0	21.0	20.0	19.0	15.0
14	16.0	14.0	15.5	13.5	18.0	17.0	22.5	18.5	20.0	19.5	18.5	16.5
15	15.0	11.0	15.5	12.0	18.5	15.5	22.5	18.0	21.0	19.0	16.5	15.0
16	15.0	10.0	17.0	12.0	19.0	16.0	23.0	18.5	22.0	20.0	16.0	15.0
17	14.5	11.0	18.0	13.5	21.0	17.0	23.0	20.0	22.0	20.5	19.0	16.0
18	16.0	10.5	19.0	15.5	20.0	18.5	24.0	21.0	20.5	18.0	19.0	16.5
19	16.5	12.5	18.0	16.0	21.5	18.5	23.5	19.5	18.0	16.0	19.5	17.5
20	16.5	14.0	18.5	16.0	20.0	18.5	24.0	22.0	17.0	15.0	19.5	17.5
21	18.0	13.5	19.0	16.0	18.0	16.5	23.5	22.0	17.0	15.5	17.5	15.5
22	17.5	15.0	19.0	16.0	17.0	15.0	23.0	21.0	19.0	17.0	16.0	14.0
23	17.0	15.0	18.5	17.0	17.5	13.5	21.0	16.0	19.0	16.0	16.0	13.5
24	16.0	13.0	18.0	16.5	17.0	16.0	21.0	16.0	18.0	17.5	16.0	14.0
25	14.5	11.5	17.5	16.0	16.5	16.0	21.0	19.5	17.5	16.0	17.0	15.5
26	12.0	9.5	19.5	15.0	18.5	17.0	19.5	16.5	18.0	15.0	16.5	16.0
27	14.0	8.0	20.0	15.0	19.5	17.0	18.5	15.5	20.0	17.0	16.5	15.0
28	13.5	11.0	20.0	16.0	19.5	19.0	18.0	15.0	20.0	19.0	15.5	14.0
29	14.0	8.5	20.0	16.5	19.5	19.0	19.0	16.5	21.0	19.0	14.0	12.5
30	15.0	8.0	20.0	17.0	20.0	17.5	19.5	17.5	21.0	20.0	14.5	12.0
31	---	---	21.0	18.0	---	---	20.0	17.0	21.5	18.0	---	---
MONTH	18.0	8.0	21.0	8.0	21.5	10.0	24.0	15.0	22.0	15.0	23.0	12.0

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD

LOCATION.--Lat 39°23'38", long 7. '10'55", Garrett County, Hydrologic Unit 02070002, on left bank 0.6 mi (1.0 km) downstream from bridge on State Highway 38 in Kitzmiller, 1.5 mi (2.4 km) downstream from Wolfden Run, and at mile 68.9 (110.9 km).

DRAINAGE AREA.--225 mi² (583 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,572.26 ft (479.225 m) above mean sea level. Prior to Oct. 15, 1954, at site 0.3 mi (0.5 km) upstream at datum 7.58 ft (2.310 m) higher. Oct. 15, 1954, to Nov. 20, 1955, nonrecording gage at bridge 0.5 mi (0.8 km) upstream at datum 21.51 ft (6.556 m) higher.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Regulation at low flow by Stony River Reservoir, 30 mi (48 km) above station (see station 01595200). Gage-height telemeter at station.

AVERAGE DISCHARGE.--28 years, 441 ft³/s (12.49 m³/s), 26.62 in/yr (676 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s (946 m³/s) Oct. 15, 1954, gage height, 13.73 ft (4.185 m), from floodmarks, present site and datum; minimum, 4.6 ft³/s (0.13 m³/s) Oct. 3-7, 1953, gage height, 1.45 ft (0.442 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1145	*8910	252	8.20	2.499
Feb. 24	1700	5550	157	7.50	2.286
Mar. 4	2200	3770	107	6.88	2.097
Mar. 13	0900	5160	146	7.38	2.249
Apr. 5	0330	4210	119	7.05	2.149

Minimum discharge, 25 ft³/s (0.71 m³/s) Sept. 11, 12, gage height, 2.35 ft (0.716 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	506	1040	255	150	78	1420	502	164	102	79	43	44
2	588	791	295	150	78	1050	913	152	89	73	37	37
3	916	661	221	145	86	828	1020	147	86	63	35	35
4	390	589	205	145	92	2350	1130	150	74	57	34	35
5	275	514	220	140	100	2500	3090	190	68	54	29	32
6	230	449	218	135	92	1630	1930	242	71	60	30	30
7	210	397	1270	130	82	1230	1520	449	85	58	42	29
8	744	367	939	125	78	969	1400	375	72	52	208	28
9	4710	334	581	125	74	831	1110	280	236	67	126	30
10	3390	439	501	120	84	774	939	245	337	78	80	28
11	2100	424	538	115	110	716	802	225	171	68	84	26
12	1310	361	721	115	190	707	675	200	124	78	68	26
13	912	320	685	110	350	2760	586	182	103	218	129	27
14	628	293	513	110	554	1670	497	294	104	159	259	31
15	490	286	479	105	411	1280	370	225	196	88	281	43
16	437	277	448	105	384	1080	324	182	120	67	153	44
17	372	251	412	100	258	905	291	159	100	56	154	46
18	315	258	358	100	261	1090	267	145	108	49	176	43
19	270	249	323	98	273	1110	245	267	91	43	112	34
20	427	261	337	94	242	970	227	236	79	38	89	67
21	1050	238	341	94	220	893	232	175	175	37	76	83
22	633	237	260	92	246	1250	208	150	114	39	68	47
23	502	210	245	90	745	1230	206	154	83	37	69	39
24	599	205	220	88	3290	1040	226	297	73	30	67	35
25	984	213	225	86	2920	836	206	185	83	69	109	34
26	1310	260	252	84	2330	722	184	154	225	277	70	46
27	897	414	230	84	2390	571	197	136	124	95	58	64
28	715	391	250	82	1980	744	184	122	93	62	68	81
29	604	390	224	82	---	718	220	112	110	51	61	62
30	536	305	188	80	---	591	184	110	102	50	53	46
31	1090	---	170	80	---	563	---	108	---	48	53	---
TOTAL	28140	11424	12124	3359	17918	35028	19885	6212	3598	2300	2921	1252
MEAN	908	381	391	108	640	1130	663	200	120	74.2	94.2	41.7
MAX	4710	1040	1270	150	3290	2760	3090	449	337	277	281	83
MIN	210	205	170	80	74	563	184	108	68	30	29	26

CAL YR 1976 TOTAL 148287 MEAN 405 MAX 4710 MIN 26 CFSM 1.80 IN 24.51
WTR YR 1977 TOTAL 144161 MEAN 395 MAX 4710 MIN 26 CFSM 1.76 IN 23.83

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: August 1961 to current year.

INSTRUMENTATION.--Temperature recorder since August 1961.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 32.0°C Aug. 15, 16, 18, 1965; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 30.5°C July 18; minimum, 0.0°C on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.0	7.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0
2	12.5	12.0	6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.0
3	14.5	12.5	7.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	1.0
4	14.0	12.5	7.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5
5	15.5	13.0	6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	3.5
6	16.0	13.0	5.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	5.0	3.5
7	15.0	14.5	6.0	5.0	0.5	0.0	0.0	0.0	0.0	0.0	4.0	3.0
8	15.0	15.0	5.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0	4.5	2.0
9	15.0	13.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	3.0
10	13.0	12.5	5.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0	7.0	4.5
11	14.5	13.0	4.0	3.5	2.5	0.5	0.0	0.0	0.0	0.0	8.0	5.0
12	14.0	11.0	3.5	2.5	4.0	2.5	0.0	0.0	0.0	0.0	8.5	6.5
13	14.5	12.0	2.5	1.5	3.5	0.0	0.0	0.0	0.0	0.0	9.5	7.5
14	14.5	10.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	9.0	7.5
15	12.0	9.5	3.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	9.5	6.5
16	12.0	10.5	2.5	1.5	2.5	1.0	0.0	0.0	0.0	0.0	10.0	8.5
17	10.5	9.0	2.5	0[illegible]	2.0	1.0	0.0	0.0	0.0	0.0	8.5	7.0
18	9.0	7.5	4.0	2.0	1.0	0.5	0.0	0.0	0.0	0.0	8.5	7.0
19	8.0	6.0	5.5	3.0	1.5	0.0	0.0	0.0	0.0	0.0	8.0	6.0
20	7.5	7.0	4.0	2.5	4.0	1.5	0.0	0.0	0.0	0.0	7.0	6.0
21	7.5	7.0	2.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	7.5	5.0
22	7.0	6.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	4.0
23	6.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	3.0
24	8.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	6.0	4.0
25	9.5	8.0	1.0	0.0	0.0	0.0	0.0	0.0	3.5	1.5	5.5	2.5
26	9.5	7.5	2.0	0.5	0.0	0.0	0.0	0.0	4.5	2.5	7.0	4.0
27	7.5	5.5	5.0	2.0	0.0	0.0	0.0	0.0	4.5	3.5	7.5	4.5
28	5.5	4.5	5.5	5.0	0.0	0.0	0.0	0.0	4.0	2.5	9.0	7.5
29	6.0	4.5	5.0	0.0	0.0	0.0	0.0	0.0	---	---	12.0	8.0
30	6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	14.0	10.5
31	7.5	6.0	---	---	0.0	0.0	0.0	0.0	---	---	13.0	10.0
MONTH	16.0	4.5	7.5	0.0	4.0	0.0	0.0	0.0	4.5	0.0	14.0	1.0

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.0	8.5	16.0	10.0	23.5	19.0	24.0	20.5	25.0	21.5	27.5	20.5
2	10.5	9.0	16.0	13.0	21.0	16.5	25.0	18.0	27.0	18.5	27.0	21.0
3	12.0	10.5	17.0	13.5	22.0	15.5	25.5	17.0	26.5	20.5	25.0	21.5
4	11.0	7.5	16.5	15.0	22.0	13.5	24.0	19.0	27.5	19.5	26.5	20.5
5	9.0	7.5	18.0	15.0	18.5	15.5	26.0	20.5	28.0	20.5	25.5	21.0
6	8.0	6.0	19.5	15.5	20.0	16.5	28.5	21.5	28.0	22.0	26.0	21.0
7	8.0	5.0	16.0	13.5	16.5	13.5	29.0	23.0	26.5	22.0	23.5	21.5
8	8.5	7.0	15.0	11.0	18.0	10.0	28.5	23.0	25.0	21.5	21.5	20.0
9	8.5	5.5	12.5	9.5	15.0	11.5	26.5	23.0	25.0	21.5	21.5	18.5
10	8.5	6.0	11.5	8.0	15.0	10.5	24.0	21.5	26.5	21.5	23.0	18.0
11	13.5	8.0	13.0	8.5	18.0	11.5	25.0	21.0	27.0	21.5	21.0	15.5
12	15.0	11.0	15.0	8.5	20.5	13.0	27.0	22.0	24.0	22.0	20.5	13.5
13	15.5	12.0	18.5	12.5	21.5	16.0	25.0	22.0	22.5	21.0	23.5	17.0
14	14.5	12.5	17.5	14.5	20.0	17.0	27.5	21.0	22.5	20.5	21.0	18.5
15	15.0	10.5	18.5	12.5	20.5	16.0	28.0	20.5	22.5	19.5	18.5	16.0
16	15.5	10.5	19.5	12.5	21.5	16.5	28.5	21.0	26.0	21.0	17.5	15.5
17	14.5	11.0	21.0	14.0	24.0	17.0	29.0	22.5	24.0	21.5	21.5	16.5
18	15.0	10.5	22.0	16.0	23.0	19.0	30.5	23.5	22.0	18.5	22.5	17.0
19	16.0	12.0	20.5	17.0	24.5	19.5	29.0	22.0	21.5	17.0	22.5	18.0
20	15.5	14.0	23.0	17.0	23.0	19.0	29.0	24.0	21.5	15.5	22.0	19.0
21	18.5	13.0	23.0	17.0	21.0	17.0	29.0	23.5	21.5	16.0	19.0	17.0
22	18.5	15.0	22.5	16.5	19.0	15.0	29.5	22.5	24.0	18.0	18.5	15.5
23	17.0	15.5	21.0	17.5	22.0	14.5	27.5	18.0	22.5	17.5	20.0	15.0
24	16.0	13.5	20.0	17.0	20.0	16.5	---	---	20.5	19.0	19.5	15.5
25	14.5	11.5	19.5	17.0	20.5	17.0	23.0	19.0	22.0	16.0	19.5	17.0
26	12.0	10.0	23.0	16.0	22.5	17.5	22.5	18.0	22.5	15.5	19.5	17.0
27	14.0	8.0	23.5	16.0	24.0	17.5	24.0	16.5	26.0	18.5	17.5	15.5
28	13.0	11.0	24.0	16.5	24.0	20.0	24.0	16.5	26.5	21.0	17.0	15.0
29	14.0	8.5	21.0	17.5	24.0	20.0	23.5	18.5	27.0	21.0	17.5	13.0
30	15.5	8.5	22.0	18.0	25.0	18.0	25.5	20.0	24.5	21.5	19.0	13.0
31	---	---	23.0	18.5	---	---	27.5	19.5	27.0	20.5	---	---
MONTH	18.5	5.0	24.0	8.0	25.0	10.0	30.5	16.5	28.0	15.5	27.5	13.0

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV

LOCATION.--Lat 39°26'44", long 79°06'39", Garrett County, Md., Hydrologic Unit 02070002, on left bank at highway bridge at Barnum, W. Va., 0.4 mi (0.6 km) upstream from Folly Run, and 4.0 mi (6.4 km) southwest of Piedmont, W. Va.

DRAINAGE AREA.--266 mi^2 (689 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,151.82 ft (351.075 m) above mean sea level.

REMARKS.--Water-discharge records good except those for winter periods and period of no gage-height record, Oct. 9-12, which are fair.. Regulation at low flow by Stony River Reservoir, 39 mi (63 km) above station (see station 01595200).

AVERAGE DISCHARGE.--11 years, 515 ft^3/s (14.58 m^3/s), 26.29 in/yr (668 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft^3/s (362 m^3/s) Dec. 8, 1972, gage height, 9.86 ft (3.005 m); minimum, 10 ft^3/s (0.28 m^3/s) Oct. 2, 3, 1968, gage height, 1.69 ft (0.515 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft^3/s (110 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	Unknown	*9800	278	9.06	2.761	Mar. 13	Unknown	6380	181	7.88	2.402
Feb. 24	Unknown	6700	190	8.01	2.441	Apr. 5	Unknown	5400	153	7.45	2.271

Minimum discharge, 28 ft^3/s (0.79 m^3/s) Sept. 12, 13, gage height, 2.12 ft (0.646 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	599	1190	308	180	88	1600	548	196	126	93	52	49
2	651	888	354	170	86	1200	1030	185	112	84	47	40
3	987	770	264	160	92	950	1160	178	106	75	43	38
4	452	684	245	155	98	2700	1220	173	97	66	41	38
5	315	592	260	150	105	2900	3500	214	89	63	38	36
6	264	530	255	150	96	2000	2200	270	90	60	35	33
7	248	477	1340	145	92	1400	1700	540	101	73	38	31
8	768	438	1110	145	88	1070	1480	458	98	63	208	31
9	5600	384	660	140	82	903	1140	342	225	65	150	31
10	3800	497	570	135	105	835	947	295	402	93	99	34
11	2400	524	593	125	125	775	812	269	208	79	89	34
12	1550	440	755	120	220	752	685	238	147	90	83	30
13	896	392	782	120	400	3100	592	218	124	198	109	30
14	652	354	571	120	630	1850	514	317	113	204	236	35
15	510	348	552	115	470	1450	391	266	218	108	352	43
16	467	336	512	115	350	1200	349	212	148	79	181	51
17	411	306	481	115	290	951	315	187	118	68	145	55
18	336	317	417	110	300	1160	292	180	116	59	212	51
19	310	305	374	110	310	1220	271	315	111	52	129	42
20	460	310	384	110	284	1020	258	296	92	47	101	46
21	1310	293	401	105	255	950	253	213	171	43	88	106
22	749	284	300	105	264	1360	237	183	139	45	77	59
23	578	259	280	100	678	1340	238	195	98	45	76	47
24	650	245	250	98	3500	1120	266	353	83	39	68	43
25	1180	260	265	96	3100	889	243	224	93	53	106	41
26	1570	289	295	96	2700	777	220	191	228	319	83	46
27	1030	450	260	94	2800	624	224	166	144	122	65	66
28	815	453	290	92	2300	794	216	147	107	78	66	83
29	688	441	260	90	---	804	250	140	106	63	67	78
30	609	360	215	88	---	649	222	139	114	60	58	56
31	1240	---	205	88	---	611	---	134	---	58	56	---
TOTAL	32095	13416	13808	3742	19908	38954	21773	7434	4124	2644	3198	1403
MEAN	1035	447	445	121	711	1257	726	240	137	85.3	103	46.8
MAX	5600	1190	1340	180	3500	3100	3500	540	402	319	352	106
MIN	248	245	205	88	82	611	216	134	83	39	35	30

CAL YR 1976 TOTAL 166344 MEAN 454 MAX 5600 MIN 30 CFSM 1.71 IN 23.26
WTR YR 1977 TOTAL 162499 MEAN 445 MAX 5600 MIN 30 CFSM 1.67 IN 22.72

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)
OCT 05...	1050	316	320	4.3	16.0	13.5	2	85	85
NOV 26...	1325	271	--	--	5.0	2.0	--	--	--
JAN 12...	1505	114	--	--	-9.0	.0	--	--	--
FEB 15...	1135	465	250	4.9	-1.0	1.0	--	--	--
MAR 07...	1140	1340	180	4.9	5.0	4.5	5	71	69
APR 07...	0945	1580	200	4.9	4.0	4.5	--	--	--
MAY 17...	0925	186	280	4.5	16.0	15.5	--	--	--
JUL 06...	1350	60	685	4.1	30.5	27.0	5	310	310
AUG 16...	0930	187	360	3.4	21.0	21.5	--	--	--
SEP 09...	1430	31	--	--	23.0	20.0	--	--	--

DATE	TOTAL ACIDITY AS H+ (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT 05...	.8	21	7.9	2.7	1.5	0	130	3.4	.2
NOV 26...	--	--	--	--	--	--	--	--	--
JAN 12...	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--
MAR 07...	--	20	5.0	2.2	1.3	2	61	3.2	.1
APR 07...	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--
JUL 06...	1.0	100	14	3.9	1.9	0	330	3.5	.1
AUG 16...	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT 05...	6.7	188	177	.47	.04	3100	1800	1100	1100
NOV 26...	--	--	--	--	--	--	--	--	--
JAN 12...	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--
MAR 07...	4.7	126	100	.71	.02	3200	800	380	410
APR 07...	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--
JUL 06...	7.5	476	463	.43	.00	330	40	1200	1200
AUG 16...	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--

01596500 SAVAGE RIVER NEAR BARTON, MD

LOCATION.--Lat 39°34'05", long 79°06'10", Garrett County, Hydrologic Unit 02070002, on right bank 0.9 mi (1.4 km) upstream from Bear Pen Run, 1.5 mi (2.4 km) downstream from Popular Lick Run, 5.4 mi (8.7 km) northwest of Barton, and 10 mi (16 km) upstream from mouth.

DRAINAGE AREA.--49.1 mi² (127.2 km²).

PERIOD OF RECORD.--September 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1603.88 ft (488.863 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are fair to poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 73.4 ft³/s (2.079 m³/s), 20.30 in/yr (516 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,510 ft³/s (213 m³/s) Oct. 15, 1954, gage height, 8.45 ft (2.576 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.40 ft³/s (0.011 m³/s) Sept. 3, 4, 1966, gage height, 0.96 ft (0.293 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1300	1190	33.7	3.79	1.155	Mar. 4	1930	896	25.4	3.46	1.055
Feb. 24	1945	*1360	38.5	3.96	1.207	Mar. 13	0815	1190	33.7	3.79	1.155

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Sept. 12, 13, 14, gage height, 1.09 ft (0.332 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	191	29	21	9.8	221	102	20	12	6.5	4.5	3.6
2	43	168	28	20	9.8	143	279	20	11	5.9	3.7	3.6
3	50	129	27	19	9.6	105	367	19	11	5.1	3.1	4.6
4	35	101	25	19	9.4	506	249	19	9.6	4.6	2.9	3.1
5	25	78	24	18	11	614	472	36	8.9	4.5	2.9	2.8
6	21	65	22	18	10	349	338	39	31	4.4	2.6	2.8
7	18	55	180	17	9.2	224	223	68	21	6.1	2.9	2.6
8	76	49	240	16	8.6	155	183	62	15	10	4.0	2.6
9	759	42	145	15	8.2	119	146	54	27	6.9	3.2	2.5
10	439	46	105	15	8.2	105	120	44	27	5.3	3.0	2.4
11	198	47	94	14	14	95	97	39	20	4.8	3.4	2.2
12	116	44	90	14	70	96	79	33	16	11	7.3	1.9
13	81	41	82	13	140	772	67	30	14	28	5.8	1.8
14	60	38	78	13	140	447	59	28	15	15	5.7	2.1
15	47	38	72	13	110	264	52	25	30	8.9	6.5	2.5
16	44	37	71	13	90	182	46	22	20	6.8	10	3.9
17	35	35	63	13	70	131	41	21	16	7.8	64	6.3
18	29	36	52	12	60	191	38	19	19	6.3	33	4.5
19	25	35	46	12	45	225	35	31	16	4.9	17	3.3
20	61	34	45	12	35	189	32	23	15	3.9	12	3.8
21	175	32	37	12	30	151	29	20	25	4.4	9.0	3.2
22	135	31	32	11	35	284	27	18	17	8.1	15	2.9
23	96	28	32	11	200	349	27	17	14	5.4	12	2.7
24	124	28	31	11	600	236	27	20	12	4.0	9.9	2.5
25	223	27	30	11	740	165	26	16	12	7.7	8.6	3.0
26	251	27	29	11	438	124	24	15	12	12	6.5	11
27	188	34	28	11	393	97	23	14	9.6	7.2	5.5	11
28	128	38	27	11	328	172	23	13	9.0	5.1	4.9	9.7
29	95	41	25	10	---	230	26	12	9.0	4.2	4.2	7.0
30	78	29	23	10	---	180	22	16	7.5	6.8	3.5	5.1
31	157	---	21	10	---	136	---	13	---	5.7	4.3	---
TOTAL	3888	1624	1833	426	3631.8	7257	3279	826	481.6	227.3	280.9	121.0
MEAN	125	54.1	59.1	13.7	130	234	109	26.6	16.1	7.33	9.06	4.03
MAX	759	191	240	21	740	772	472	68	31	28	64	11
MIN	18	27	21	10	8.2	95	22	12	7.5	3.9	2.6	1.8
CFSM	2.55	1.10	1.20	.28	2.65	4.77	2.22	.54	.33	.15	.19	.08
IN.	2.95	1.23	1.39	.32	2.75	5.50	2.48	.63	.36	.17	.21	.09

CAL YR 1976 TOTAL 22891.5 MEAN 62.5 MAX 759 MIN 1.9 CFSM 1.27 IN 17.34
WTR YR 1977 TOTAL 23875.6 MEAN 65.4 MAX 772 MIN 1.8 CFSM 1.33 IN 18.09

01597000 CRABTREE CREEK NEAR SWANTON, MD

LOCATION.--Lat 39°30'00", long 79°09'35", Garrett County, Hydrologic Unit 02070002, on left bank 0.5 mi (0.8 km) upstream from mouth, 1.0 mi (1.6 km) downstream from Springlick Run, and 5.0 mi (8.0 km) northeast of Swanton.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

PERIOD OF RECORD.--September 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,529.06 ft (466.058 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good except those for winter periods, which are fair. Small diversion above station by Baltimore and Ohio Railroad. Several observations of water temperature were made during the year.

AVERAGE DISCHRAGE.--29 years, 28.4 ft³/s (0.804 m³/s), 23.09 in/yr (586 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,260 ft³/s (92.3 m³/s) July 12, 1949, gage height, 5.01 ft (1.527 m), from rating curve extended above 210 ft³/s (5.95 m³/s) on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.1 ft³/s (0.003 m³/s) Dec. 3, 1953, gage height, 0.56 ft (0.171 m); minimum daily, 0.8 ft³/s (0.023 m³/s) Nov. 6, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 320 ft³/s (9.06 m³/s) Oct. 9, gage height, 2.39 ft (0.728 m); maximum gage height, 2.43 ft (0.741 m) Feb. 24, backwater from ice; no peak above base of 330 ft³/s (9.3 m³/s); minimum, 1.2 ft³/s (0.034 m³/s) Sept. 12, 13, 14, gage height, 0.69 ft (0.210 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	73	15	11	4.8	79	39	13	9.2	3.8	3.0	1.6
2	18	69	14	10	4.8	56	61	13	8.6	3.6	2.7	1.7
3	24	56	13	10	4.7	44	81	13	8.6	3.2	2.5	2.1
4	17	46	13	8.8	4.7	150	83	13	7.8	3.0	2.4	1.7
5	13	37	13	8.1	5.3	199	191	16	7.2	3.0	2.3	1.6
6	10	31	12	7.8	5.0	123	136	18	6.8	3.0	2.3	1.6
7	8.8	27	67	7.6	4.7	85	95	38	6.4	4.7	2.6	1.6
8	19	24	80	7.4	4.4	62	82	45	5.8	3.6	3.8	1.6
9	193	21	59	7.2	4.3	50	68	41	13	4.5	2.7	1.6
10	145	26	44	7.0	4.7	44	56	35	11	3.4	2.4	1.5
11	81	26	40	6.8	9.2	39	46	29	8.7	3.2	2.4	1.4
12	52	27	39	6.4	19	41	38	24	8.1	4.7	2.5	1.3
13	38	25	38	6.0	30	165	33	21	6.9	14	2.6	1.2
14	29	24	36	5.8	31	133	29	19	7.5	6.6	3.1	1.4
15	22	23	34	5.8	30	90	25	16	8.7	4.8	2.8	1.7
16	19	21	31	5.8	25	67	22	14	6.4	4.2	2.2	2.1
17	15	19	28	5.8	20	52	20	13	5.8	3.7	3.3	2.5
18	13	19	23	5.6	22	74	17	17	6.4	3.5	2.8	1.8
19	12	18	20	5.6	19	86	18	32	5.2	3.0	2.1	1.6
20	22	18	20	5.6	15	79	16	32	5.2	2.8	2.0	2.0
21	43	17	19	5.6	14	62	15	28	6.1	2.9	1.8	1.7
22	42	16	17	5.4	16	97	14	23	4.7	3.7	3.2	1.5
23	36	15	17	5.4	42	118	15	19	4.3	2.5	2.3	1.4
24	44	14	17	5.3	165	91	14	16	4.0	2.4	2.2	1.4
25	76	14	16	5.2	205	69	14	14	7.8	13	2.3	1.5
26	119	14	16	5.2	165	53	13	13	6.9	11	1.8	2.5
27	89	16	15	5.2	149	43	13	11	5.0	5.6	1.7	3.3
28	61	17	14	5.1	118	49	13	10	4.7	4.4	1.6	3.5
29	46	19	13	5.0	---	50	14	11	5.2	3.9	1.6	2.1
30	38	16	12	5.0	---	50	13	11	4.0	4.2	1.6	1.7
31	63	---	11	4.9	---	46	---	10	---	3.4	1.9	---
TOTAL	1441.8	788	806	201.4	1141.6	2446	1294	628	206.0	143.3	74.5	54.2
MEAN	46.5	26.3	26.0	6.50	40.8	78.9	43.1	20.3	6.87	4.62	2.40	1.81
MAX	193	73	80	11	205	199	191	45	13	14	3.8	3.5
MIN	8.8	14	11	4.9	4.3	39	13	10	4.0	2.4	1.6	1.2
CFSM	2.78	1.58	1.56	.39	2.44	4.73	2.58	1.22	.41	.28	.14	.11
IN.	3.21	1.76	1.80	.45	2.54	5.45	2.88	1.40	.46	.32	.17	.12

CAL YR 1976 TOTAL 9296.3 MEAN 25.4 MAX 244 MIN 1.8 CFSM 1.52 IN 20.71
WTR YR 1977 TOTAL 9224.8 MEAN 25.3 MAX 205 MIN 1.2 CFSM 1.52 IN 20.55

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD

LOCATION.--Lat 39°30'05", long 79°07'25", Garrett County, Hydrologic Unit 02070002, on left bank 0.7 mi (1.1 km) downstream from Savage River Dam, 1.1 mi (1.8 km) downstream from Crabtree Creek, 3.2 mi (5.1 km) northwest of Bloomington, and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--106 mi^2 (275 km^2).

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WSP 1432: 1955.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,276.40 ft (389.047 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good. Diversions above station by Baltimore and Ohio Railroad and by cities of Frostburg and Westernport for municipal supply. Flow regulated by Savage River Reservoir beginning December 1950, capacity 20,000 acre-ft (24.7 hm^3). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--29 years, 164 ft^3/s (4.644 m^3/s), 21.01 in/yr (534 mm/yr), adjusted for storage since December 1950.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,530 ft^3/s (185 m^3/s) Oct. 16, 1954, gage height, 7.70 ft (2.347 m); minimum, 0.35 ft^3/s (0.010 m^3/s) Oct. 27, 1966, gage height, 0.57 ft (0.174 m); minimum daily, 0.6 ft^3/s (0.017 m^3/s) July 27-31, Aug. 5, 6, 9, 10, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,880 ft^3/s (53.2 m^3/s) Feb. 25, gage height, 4.90 ft (1.494 m); minimum, 3.3 ft^3/s (0.093 m^3/s) Apr. 26, gage height, 0.78 ft (0.238 m); minimum daily, 15 ft^3/s (0.42 m^3/s) May 3, 4, 16, 17, 26-31, June 1-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	224	94	54	24	1210	105	16	15	16	52	46
2	72	101	95	38	24	665	108	16	15	16	60	59
3	71	384	95	38	24	465	111	15	15	21	64	69
4	71	547	95	38	24	475	386	15	15	28	64	69
5	71	371	95	38	25	509	575	16	15	31	64	69
6	71	98	217	38	24	517	979	16	15	32	74	69
7	63	98	96	38	24	516	851	16	15	32	80	69
8	72	98	378	38	24	509	270	16	15	38	70	69
9	85	98	525	38	24	502	110	16	15	42	63	69
10	93	98	519	38	24	322	110	16	15	42	63	69
11	564	98	510	38	24	95	110	16	15	42	63	68
12	895	98	501	38	25	96	110	16	15	42	63	79
13	821	98	237	38	25	117	81	16	15	42	58	86
14	881	98	91	38	47	937	64	16	15	42	41	74
15	670	370	92	38	77	1710	67	16	15	42	29	67
16	262	252	341	38	87	931	67	15	15	42	23	56
17	100	95	338	38	87	494	67	15	15	42	24	49
18	100	95	90	37	87	249	42	148	15	45	23	49
19	100	95	90	37	87	100	24	165	15	52	23	60
20	102	95	91	29	87	101	23	163	15	55	30	67
21	344	95	90	23	87	351	23	263	15	60	35	67
22	550	95	90	23	87	505	23	254	15	63	35	67
23	316	95	90	23	88	511	23	16	15	63	35	66
24	101	95	89	23	98	512	23	16	19	63	35	66
25	103	95	89	23	924	509	24	16	22	74	35	66
26	383	95	89	23	1780	238	18	15	22	57	35	67
27	557	95	89	25	1720	100	16	15	18	42	40	67
28	552	95	89	28	1540	102	16	15	16	42	48	66
29	545	95	326	26	---	103	16	15	16	42	48	66
30	537	94	220	26	---	104	16	15	16	48	48	66
31	532	---	85	24	---	105	---	15	---	52	48	---
TOTAL	9758	4460	5936	1032	7198	13660	4458	1399	474	1350	1473	1976
MEAN	315	149	191	33.3	257	441	149	45.1	15.8	43.5	47.5	65.9
MAX	895	547	525	54	1780	1710	979	263	22	74	80	86
MIN	63	94	85	23	24	95	16	15	15	16	23	46
(‡)	8390	7000	3960	4030	7260	11310	17370	18740	19550	17770	15600	11960

CAL YR 1976 TOTAL 52945 MEAN 145 MAX 1150 MIN 15 CFSM 1.36 IN 18.58
WTR YR 1977 TOTAL 53174 MEAN 146 MAX 1780 MIN 15 CFSM 1.37 IN 18.66

‡ Monthend contents, in acre-feet, in Savage River Reservoir (contents on Sept. 30, 1976, 11,640 acre-feet). Records furnished by Corps of Engineers.

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD

LOCATION.--Lat 39°28'45", long 79°03'55", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank 0.2 mi (0.3 km) downstream from Savage River, 0.5 mi (0.8 km) northwest of Luke, and at mile 53.3 (85.8 km).

DRAINAGE AREA.--404 mi^2 (1,046 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1899 to July 1906 (published as "at Piedmont, W. Va."), October 1949 to current year.

REVISED RECORDS.--WSP 192: 1899-1904. WSP 1432: 1905-6, drainage area at former site.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 944.22 ft (287.798 m) above mean sea level. June 27, 1899, to July 15, 1906, nonrecording gage at bridge 1.1 mi (1.8 km) downstream at datum about 35 ft (11 m) lower.

REMARKS.--Water-discharge records good except those for winter periods, which are fair to poor. Flow regulated since 1913 by Stony River Reservoir, 45 mi (72 km) above station (see station 01595200), and since December 1950, by Savage River Reservoir, 5 mi (8 km) above station (see station 01597500). Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906.

AVERAGE DISCHARGE.--34 years (water years 1900-05, 1950-77), 697 ft^3/s (19.74 m^3/s), 23.43 in/yr (595 mm/yr), adjusted for storage since October 1949.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,400 ft^3/s (1,120 m^3/s) Oct. 15, 1954, gage height, 17.15 ft (5.227 m); minimum daily, 6 ft^3/s (0.17 m^3/s) Sept. 4, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,230 ft^3/s (261 m^3/s) Oct. 9, gage height, 9.21 ft (2.807 m); minimum, 90 ft^3/s (2.55 m^3/s) July 3, 4, gage height, 1.20 ft (0.366 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	749	1580	400	230	120	2950	714	229	138	108	104	99
2	780	1070	450	230	120	2010	1220	218	126	98	105	101
3	1150	1180	360	225	130	1500	1460	211	120	94	107	110
4	572	1290	340	220	140	2970	1740	209	109	93	104	110
5	401	1050	360	210	150	3950	4650	248	101	94	102	109
6	343	651	460	205	140	2750	3560	302	102	92	108	106
7	317	589	1670	200	125	2140	2890	569	111	105	118	104
8	874	551	1660	195	120	1780	2100	523	[illegible]	98	250	103
9	5290	503	1260	190	115	1580	1450	394	206	105	222	102
10	4310	602	1140	180	125	1320	1230	336	433	131	167	102
11	2840	638	1130	180	170	942	1070	306	232	123	146	102
12	2240	552	1290	175	260	917	920	270	162	135	146	107
13	1780	500	1070	170	450	3450	784	249	136	211	158	115
14	1550	461	669	165	750	3040	672	331	126	272	237	109
15	1230	704	650	160	600	3230	534	309	224	153	406	107
16	787	634	841	160	480	2320	473	243	167	120	205	111
17	522	406	857	155	400	1630	432	214	130	109	155	104
18	461	414	513	150	380	1600	384	334	127	102	231	102
19	413	400	464	150	420	1510	333	489	125	103	151	103
20	539	407	474	145	390	1240	314	496	107	101	124	113
21	1710	387	497	145	360	1430	308	498	169	103	117	167
22	1380	378	390	140	340	2090	288	460	161	109	111	130
23	976	351	370	140	800	2130	289	210	113	109	107	115
24	747	330	340	135	3200	1860	325	363	101	104	105	111
25	1340	349	325	135	4600	1590	296	248	113	119	135	108
26	2060	380	400	130	4540	1170	265	208	241	370	121	115
27	1720	529	360	130	4520	802	260	182	172	174	103	136
28	1460	550	350	130	4000	978	254	163	124	118	109	149
29	1310	537	550	125	---	1020	292	154	120	104	119	149
30	1210	459	445	125	---	837	263	154	130	106	108	124
31	1840	---	260	120	---	781	---	147	---	108	106	---
TOTAL	42901	18432	20345	5150	27945	57517	29770	9267	4534	3971	4587	3423
MEAN	1384	614	656	166	998	1855	992	299	151	128	148	114
MAX	5290	1580	1670	230	4600	3950	4650	569	433	370	406	167
MIN	317	330	260	120	115	781	254	147	101	92	102	99

CAL YR 1976 TOTAL 228453 MEAN 624 MAX 5290 MIN 96 CFSM 1.55 IN 21.03
WTR YR 1977 TOTAL 227842 MEAN 624 MAX 5290 MIN 92 CFSM 1.55 IN 20.97

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1961 to December 1962, July to September 1963, December 1963 to September 1973, October 1974 to current year.

INSTRUMENTATION.--Temperature recorder during all periods.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 33.0°C July 3, 1966; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum 32.0°C July 18; minimum, 0.0°C on many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.5	12.5	13.0	7.5	6.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0
2	13.5	13.0	13.0	8.0	5.5	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3	15.5	12.5	14.0	7.5	5.5	7.0	0.0	0.0	0.0	0.0	0.0	0.0
4	15.0	13.5	14.0	8.0	6.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0
5	16.0	13.5	15.0	8.0	5.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0
6	16.0	14.0	15.0	6.0	4.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0
7	15.5	15.0	15.5	6.5	4.5	5.5	1.0	0.0	0.0	0.5	0.0	0.0
8	16.0	15.0	15.5	6.0	2.5	4.0	1.5	0.0	0.5	0.5	0.0	0.0
9	15.0	12.5	13.5	3.0	0.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
10	13.0	12.0	12.5	6.5	3.0	5.0	2.0	0.0	0.5	0.0	0.0	0.0
11	14.0	12.5	13.0	6.5	4.5	5.0	4.0	1.5	3.5	0.5	0.0	0.0
12	13.5	11.0	12.5	4.5	3.0	3.5	5.5	4.0	4.5	0.0	0.0	0.0
13	14.5	11.0	13.0	3.5	2.0	3.0	5.0	0.0	2.5	0.5	0.0	0.0
14	14.5	11.5	12.5	3.0	1.0	2.5	0.0	0.0	0.0	0.5	0.0	0.0
15	12.5	8.5	10.5	4.5	3.0	3.5	1.0	0.0	0.5	0.5	0.0	0.0
16	13.0	11.0	11.5	4.0	2.0	3.5	3.5	1.5	2.5	1.0	0.0	0.0
17	10.5	9.5	10.0	3.5	1.5	2.5	3.0	2.0	2.5	0.5	0.0	0.0
18	9.5	7.0	8.5	5.0	3.0	4.0	2.5	1.0	2.0	1.0	0.0	0.5
19	8.0	5.0	6.5	6.5	4.5	5.5	3.0	0.5	1.5	1.0	0.0	0.5
20	8.5	5.5	7.0	6.5	4.0	5.0	5.0	3.0	4.0	0.5	0.0	0.0
21	8.5	8.5	8.5	3.5	1.5	3.0	4.0	0.0	1.0	0.5	0.0	0.0
22	8.0	5.5	6.5	2.5	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
23	7.0	4.0	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
24	8.0	7.0	7.5	0.5	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.5
25	10.0	8.0	9.0	1.5	0.0	0.5	0.0	0.0	0.0	1.5	0.0	1.0
26	10.0	8.0	9.5	3.0	0.5	1.5	0.0	0.0	0.0	1.5	0.5	1.0
27	7.5	5.5	6.0	6.0	3.0	4.5	0.0	0.0	0.0	1.0	0.0	1.0
28	5.5	3.5	4.5	7.0	6.0	6.5	0.0	0.0	0.0	0.5	0.0	0.5
29	6.0	3.5	5.0	6.5	1.0	4.0	0.0	0.0	0.0	0.5	0.0	0.0
30	5.5	4.0	5.0	1.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
31	8.0	6.0	7.0	---	---	---	0.0	0.0	0.0	1.0	0.0	0.5
MONTH	16.0	3.5	10.5	8.0	0.0	4.0	5.5	0.0	1.0	1.5	0.0	0.0

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.5	0.0	0.5	4.0	3.0	3.5	13.0	8.5	11.0	18.0	11.0	14.5
2	1.5	0.5	1.0	4.0	1.0	2.5	10.5	8.5	10.0	18.0	14.5	16.0
3	2.0	0.5	1.0	5.5	1.5	3.5	13.0	10.5	11.5	20.0	15.0	17.5
4	1.0	0.5	0.5	5.5	5.0	5.0	11.0	7.5	9.0	19.5	16.5	17.5
5	1.5	0.5	1.0	8.0	4.5	6.0	9.5	7.0	8.0	21.5	16.5	18.5
6	0.5	0.0	0.5	8.0	5.0	6.5	8.0	5.5	6.5	22.0	17.5	19.5
7	1.0	0.0	0.5	6.5	5.0	5.5	8.5	4.0	6.0	19.0	15.5	17.0
8	0.5	0.0	0.5	7.0	3.5	5.5	10.0	7.0	8.0	17.5	12.5	15.0
9	1.0	0.0	0.5	8.5	4.0	6.5	9.5	5.0	7.5	14.0	11.0	12.5
10	2.0	0.5	1.0	9.5	6.0	8.0	9.5	5.5	7.5	13.0	10.0	11.5
11	2.0	0.5	1.0	10.5	6.0	8.5	14.5	8.0	11.5	15.0	10.0	12.5
12	2.0	1.0	1.5	9.5	8.0	9.0	17.0	12.0	14.5	16.5	10.5	14.0
13	1.5	0.0	1.0	10.0	9.0	9.5	17.5	12.0	15.0	20.5	14.0	17.0
14	1.5	0.0	1.0	9.0	8.0	8.5	16.5	13.5	15.0	20.5	16.0	18.0
15	2.0	0.0	1.0	11.0	7.0	9.0	15.5	11.0	13.5	20.5	14.5	17.0
16	1.0	0.0	0.5	11.5	9.0	10.0	16.0	11.0	13.5	22.0	14.5	18.0
17	0.5	0.0	0.5	9.5	6.5	8.0	16.0	12.0	14.0	23.5	16.0	20.0
18	1.5	0.0	0.5	10.0	7.5	9.0	15.5	11.5	14.0	22.5	18.0	20.0
19	2.0	0.0	0.5	9.5	7.0	8.0	17.0	13.0	15.0	23.5	19.0	21.0
20	2.0	0.5	1.0	9.0	6.5	7.5	16.5	14.5	15.5	25.0	19.5	22.0
21	1.5	0.0	0.5	9.0	5.5	7.0	19.5	13.5	16.5	26.0	19.0	22.0
22	1.5	0.5	0.5	7.5	5.5	7.0	20.5	16.5	18.0	25.0	18.0	21.5
23	1.5	0.5	1.0	6.5	2.0	5.0	19.0	17.0	18.0	24.5	20.5	22.5
24	2.5	0.5	1.5	6.5	4.0	5.0	17.5	14.5	16.5	23.5	19.5	21.5
25	5.5	2.0	4.0	6.5	2.5	4.5	16.0	12.5	14.0	22.5	19.5	21.0
26	6.5	3.5	5.5	8.5	3.5	6.0	13.0	10.5	11.5	25.5	19.0	22.0
27	6.5	4.0	5.0	8.5	4.0	6.5	15.0	8.5	11.5	26.0	18.0	22.0
28	5.0	2.5	3.5	10.0	7.5	8.5	15.0	11.5	13.0	26.0	19.0	22.5
29	---	---	---	14.0	9.0	11.5	14.5	9.0	12.0	24.0	20.5	22.5
30	---	---	---	16.0	11.0	13.5	16.0	9.5	12.5	23.5	20.0	21.5
31	---	---	---	14.5	11.0	12.5	---	---	---	24.5	20.0	22.0
MONTH	6.5	0.0	1.5	16.0	1.0	7.5	20.5	4.0	12.5	26.0	10.0	18.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	21.0	23.5	26.5	22.5	24.0	27.0	22.5	24.5	29.0	22.0	25.5
2	24.5	19.0	21.5	27.5	20.0	23.5	28.0	20.0	24.0	28.0	22.5	25.0
3	25.5	18.5	21.5	27.5	19.0	23.5	27.5	21.0	24.0	25.5	22.0	23.5
4	26.0	16.0	21.0	26.0	21.0	23.5	28.0	20.5	24.5	27.0	21.0	23.5
5	22.0	18.5	20.0	28.0	22.0	24.5	28.0	20.5	24.5	25.5	21.5	23.5
6	24.5	19.0	21.0	30.0	22.5	26.0	28.0	22.0	25.0	26.0	21.0	23.5
7	19.0	14.5	17.0	31.0	25.0	27.5	27.0	22.5	24.0	23.5	21.0	22.0
8	19.5	12.5	16.0	30.0	25.0	27.0	26.5	22.5	24.5	21.5	20.0	20.5
9	16.5	14.0	15.5	28.0	24.5	26.0	26.5	23.0	25.0	21.0	18.0	19.5
10	17.5	13.0	15.0	26.0	23.5	25.0	27.5	23.5	25.0	23.0	18.0	20.0
11	21.0	13.5	17.0	26.0	23.0	24.5	28.0	23.0	25.5	21.0	16.0	18.0
12	23.0	15.5	19.0	29.5	23.5	26.0	25.5	24.0	24.5	20.0	14.0	17.0
13	24.5	18.5	21.5	29.5	24.0	26.5	25.5	22.5	24.0	22.5	16.5	19.0
14	21.5	20.0	20.5	29.0	23.5	26.0	25.5	22.5	23.5	21.0	19.0	20.0
15	24.5	18.5	21.5	29.5	22.5	26.0	24.0	21.5	23.0	18.5	16.0	17.0
16	25.5	20.0	22.5	30.5	23.0	26.5	27.5	22.5	24.5	18.5	15.5	17.0
17	27.0	20.5	23.5	30.5	24.5	27.5	26.0	23.5	25.0	24.0	17.5	20.0
18	26.5	22.0	24.5	32.0	24.5	28.0	24.5	20.5	22.5	24.5	18.5	21.5
19	28.5	22.5	25.0	31.0	24.0	27.5	23.5	18.0	20.5	24.0	19.0	21.5
20	26.5	22.5	24.0	30.5	25.5	27.5	24.5	17.5	20.5	24.0	20.0	21.5
21	24.5	20.5	22.5	30.0	25.0	27.0	23.0	17.5	20.5	20.0	18.0	19.0
22	23.0	18.0	20.5	30.0	24.0	26.5	25.0	19.5	22.0	19.5	17.0	18.0
23	25.0	17.0	21.0	28.0	20.0	24.0	25.0	19.0	22.0	22.0	15.5	18.5
24	24.0	19.0	22.0	28.0	19.0	23.5	22.5	20.5	21.5	20.0	16.5	18.0
25	24.5	20.5	22.0	24.5	23.0	23.5	24.0	17.0	20.5	21.5	17.5	19.0
26	25.5	20.5	22.5	23.5	20.0	21.5	24.0	17.0	20.5	21.0	17.5	19.0
27	27.0	21.0	24.0	26.0	18.5	22.0	26.5	20.0	23.0	19.0	16.0	17.5
28	26.0	23.0	24.5	26.5	18.0	22.0	27.5	22.0	24.5	17.5	15.5	16.5
29	28.5	23.0	25.0	25.5	20.0	22.5	29.0	23.0	25.5	19.0	14.0	16.0
30	28.5	21.0	25.0	27.0	21.5	24.0	26.5	23.0	25.0	20.5	14.0	16.5
31	---	---	---	29.0	21.0	25.0	28.0	22.0	25.0	---	---	---
MONTH	28.5	12.5	21.5	32.0	18.0	25.0	29.0	17.0	23.5	29.0	14.0	20.0

01599000 GEORGES CREEK AT FRANKLIN, MD

LOCATION.--Lat 39°29'38", long 79°02'42", Allegany County, Hydrologic Unit 02070002, on right bank at Franklin, and 1.2 mi (1.9 km) upstream from Westernport and mouth.

DRAINAGE AREA.--72.4 mi^2 (187.5 km^2).

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Westernport"), October 1929 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1940.

GAGE.--Water-stage recorder. Datum of gage is 958.96 ft (292.291 m) above mean sea level (Westvaco Corporation bench mark). May 4, 1905, to July 15, 1906, nonrecording gage at bridge 0.8 mi (1.3 km) downstream at different datum. Oct. 16, 1929, to Oct. 1, 1937, water-stage recorder at site 95 ft (29 m) downstream at present datum.

REMARKS.--Records good except those for winter periods, which are fair, and period of no gage-height record, Jan. 14 to Feb. 24, which is poor. Records include about 0.5 ft^3/s (0.014 m^3/s) of sewage from city of Frostburg, which obtains its water supply from Big Piney Run (Monongahela River basin) and Savage River. A negligible discharge is diverted above station by Frostburg Water Co. for municipal supplies of Eckhart and Welch Hill. An undetermined amount of water is diverted from the upper third of basin into the Wills Creek basin by the Hoffman drainage tunnel (see station 01601500). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years (water years 1930-77), 79.6 ft^3/s (2.254 m^3/s), 14.93 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft^3/s (241 m^3/s) Mar. 17, 1936, gage height, 9.6 ft (2.93 m), site then in use, from rating curve extended above 2,000 ft^3/s (56.6 m^3/s) on basis of slope-area measurement of peak flow; minimum, 1.6 ft^3/s (0.045 m^3/s) Sept. 29 to Oct. 13, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1924, reached a stage of about 10 ft (3.0 m), from floodmarks, at site 95 ft (29 m) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1015	*1650	46.7	7.07	2.155	Mar. 13	0700	1550	43.9	6.92	2.109

Minimum discharge, 3.0 ft^3/s (0.085 m^3/s) Sept. 11, 12, 13, 14, gage height, 3.01 ft (0.917 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	174	32	26	12	207	144	42	19	9.2	6.5	4.7
2	71	143	31	25	12	156	397	41	18	9.2	5.9	4.4
3	71	128	29	24	15	126	348	40	17	8.5	5.6	4.5
4	40	118	28	25	18	562	343	38	16	7.8	5.5	4.3
5	28	102	27	24	20	505	633	49	15	7.8	5.1	4.0
6	21	89	26	23	16	352	430	48	32	8.0	5.4	4.3
7	28	79	170	22	16	256	352	61	29	9.2	6.2	4.1
8	171	69	124	22	15	195	289	52	18	10	7.3	4.7
9	961	64	85	21	15	162	223	43	33	11	5.9	4.8
10	402	71	82	21	20	137	193	40	28	10	5.0	4.7
11	201	67	90	21	25	123	164	38	20	11	4.8	3.8
12	133	61	93	20	35	124	143	36	16	14	6.5	3.0
13	107	57	84	20	60	863	126	34	15	13	7.0	3.0
14	82	54	65	19	90	495	118	34	16	12	10	3.6
15	64	52	68	18	60	352	112	32	31	9.9	14	4.9
16	57	49	65	18	55	264	101	29	20	9.2	9.8	6.2
17	47	46	62	17	50	206	91	26	15	9.2	14	7.6
18	40	45	55	17	45	320	82	26	17	9.2	12	5.6
19	34	43	50	16	60	285	87	40	14	8.5	6.6	4.8
20	125	42	54	16	50	243	71	31	16	8.5	5.2	6.6
21	214	40	49	15	40	215	64	25	27	8.5	4.8	5.1
22	120	39	41	15	30	379	58	23	18	8.7	7.5	4.8
23	98	35	44	14	90	348	64	23	13	7.8	5.7	4.7
24	125	33	36	14	430	281	68	32	11	7.2	6.2	4.6
25	195	34	39	14	570	220	60	24	14	13	6.2	7.1
26	236	35	43	13	421	186	55	22	13	19	5.3	12
27	161	38	38	13	361	156	52	20	11	7.8	5.3	13
28	131	36	40	13	276	272	49	18	12	6.0	5.0	12
29	113	41	36	12	---	233	57	17	14	5.4	4.6	7.1
30	98	30	28	12	---	192	47	18	11	7.2	5.6	6.0
31	214	---	27	12	---	172	---	18	---	7.4	5.9	---
TOTAL	4553	1914	1741	562	2907	8587	5021	1020	549	293.2	210.4	170.0
MEAN	147	63.8	56.2	18.1	104	277	167	32.9	18.3	9.46	6.79	5.67
MAX	961	174	170	26	570	863	633	61	33	19	14	13
MIN	21	30	26	12	12	123	47	17	11	5.4	4.6	3.0
CFSM	2.03	.88	.78	.25	1.44	3.83	2.31	.45	.25	.13	.09	.08
IN.	2.34	.98	.89	.29	1.49	4.41	2.58	.52	.28	.15	.11	.09

CAL YR 1976 TOTAL 25725.0 MEAN 70.3 MAX 961 MIN 6.3 CFSM .97 IN 13.22
WTR YR 1977 TOTAL 27527.6 MEAN 75.4 MAX 961 MIN 3.0 CFSM 1.04 IN 14.14

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD

LOCATION.--Lat 39°33'59", long 78°50'25", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland Railway bridge at Pinto, 2.8 mi (4.5 km) downstream from Mill Run, and at mile 32.6 (52.5 km).

DRAINAGE AREA.--596 mi² (1,544 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1332: 1943.

GAGE.--Water-stage recorder. Datum of gage is 648.23 ft (197.581 m) above mean sea level (Corps of Engineers bench mark). Prior to Dec. 10, 1938, nonrecording gage at highway bridge 250 ft (76 m) downstream at same datum.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Some regulation at low flow by Stony River Reservoir, 66 mi (106 km) above station (see station 01595200), and since December 1950, by Savage River Reservoir, 25 mi (40 km) above station (see station 01597500).

AVERAGE DISCHARGE.--39 years, 873 ft³/s (24.72 m³/s), 19.89 in/yr (505 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft³/s (1,050 m³/s) Oct. 16, 1954, gage height, 23.23 ft (7.081 m); minimum, 31 ft³/s (0.88 m³/s) Dec. 18, 19, 1943, gage height, 1.37 ft (0.418 m), result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1924, reached a stage of about 24 ft (7.3 m), discharge, about 55,000 ft³/s (1,560 m³/s). Flood of Mar. 17, 1936, reached a stage of about 23.5 ft (7.16 m), from floodmarks, discharge, about 50,000 ft³/s (1,420 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,300 ft³/s (348 m³/s) Oct. 9, gage height, 12.92 ft (3.938 m); minimum, 90 ft³/s (2.55 m³/s) July 4, Aug. 6, gage height, 1.73 ft (0.527 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	936	2120	433	300	160	3280	1070	319	178	138	116	110
2	1050	1450	484	300	160	2400	1670	299	165	116	107	101
3	1340	1380	410	295	175	1800	2400	294	153	104	109	104
4	892	1590	377	290	185	3180	2250	282	143	97	111	114
5	552	1430	408	280	190	5230	6280	318	131	102	106	112
6	462	873	473	275	185	3410	4610	376	136	103	101	116
7	420	775	1300	270	170	2630	3660	620	152	104	117	108
8	1030	710	2140	260	160	2170	2770	663	146	117	145	109
9	6850	651	1610	250	155	1900	1990	512	162	114	276	106
10	5500	686	1380	240	165	1720	1700	423	430	132	195	105
11	3180	816	1370	235	214	1210	1480	385	322	144	162	103
12	2570	704	1490	230	381	1140	1270	347	212	152	156	102
13	2040	633	1480	225	721	4920	1110	316	172	157	153	115
14	1830	582	878	220	1010	4100	950	320	158	304	211	123
15	1490	676	835	215	869	3830	798	419	208	196	384	113
16	1060	905	887	210	652	2970	689	311	239	147	270	119
17	660	514	1160	205	499	2080	618	273	170	125	186	120
18	569	496	679	200	461	2100	565	315	157	114	213	111
19	500	492	588	200	526	2220	489	505	153	106	191	106
20	625	483	581	195	497	1750	455	633	143	109	146	119
21	2010	474	631	190	433	1820	423	599	141	104	132	135
22	1750	451	475	185	395	2460	404	524	214	112	130	163
23	1350	430	430	185	667	2950	405	303	156	110	121	130
24	944	392	410	180	2860	2450	473	363	128	111	119	120
25	1720	400	392	180	5910	2070	418	334	121	115	120	118
26	2580	418	481	175	5170	1710	380	261	178	300	149	128
27	2240	534	436	175	4890	1200	353	230	237	253	123	136
28	1850	634	425	170	4420	1370	352	206	164	151	108	173
29	1630	617	552	170	---	1620	384	192	145	123	119	162
30	1480	564	677	165	---	1290	370	193	143	117	119	146
31	2150	---	325	160	---	1170	---	189	---	117	115	---
TOTAL	53260	22880	24197	6830	32280	74150	40786	11324	5357	4294	4810	3627
MEAN	1718	763	781	220	1153	2392	1360	365	179	139	155	121
MAX	6850	2120	2140	300	5910	5230	6280	663	430	304	384	173
MIN	420	392	325	160	155	1140	352	189	121	97	101	101

CAL YR 1976 TOTAL 289891 MEAN 792 MAX 6850 MIN 116 CFSM 1.33 IN 18.09
WTR YR 1977 TOTAL 283795 MEAN 778 MAX 6850 MIN 97 CFSM 1.30 IN 17.71

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT									
01...	1115	1170	750	6.9	18.0	17.0	--	--	--
NOV									
01...	1125	2240	230	7.2	9.5	8.5	--	--	--
DEC									
02...	1000	483	500	7.7	-4.0	2.0	--	--	--
JAN									
03...	1040	295	730	7.8	-7.0	.0	--	--	--
FEB									
10...	1040	164	950	6.8	6.5	2.0	--	--	--
MAR									
02...	1400	2470	200	7.1	4.0	3.5	--	--	--
APR									
01...	1245	1080	440	7.4	13.0	11.5	30	140	120
05...	1255	7470	260	8.3	15.0	7.5	--	--	--
MAY									
02...	1225	306	700	7.3	20.5	18.0	30	270	240
31...	1515	188	900	--	21.0	23.0	--	--	--
JUN									
30...	1130	147	1100	7.1	24.5	25.0	--	--	--
AUG									
01...	1145	116	1100	7.3	27.0	26.0	--	--	--
02...	1330	108	--	--	26.0	26.0	--	--	--
SEP									
01...	1000	103	1250	7.4	23.0	25.0	--	--	--

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT									
01...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
DEC									
02...	--	--	--	--	--	--	--	--	--
JAN									
03...	--	--	--	--	--	--	--	--	--
FEB									
10...	--	--	--	--	--	--	--	--	--
MAR									
02...	--	--	--	--	--	--	--	--	--
APR									
01...	41	8.4	13	2.0	21	100	26	.1	5.7
05...	--	--	--	--	--	--	--	--	--
MAY									
02...	84	14	31	3.1	36	200	57	.1	5.1
31...	--	--	--	--	--	--	--	--	--
JUN									
30...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--
SEP									
01...	--	--	--	--	--	--	--	--	--

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT								
01...	--	--	--	--	--	--	--	--
NOV								
01...	--	--	--	--	--	--	--	--
DEC								
02...	--	--	--	--	--	--	--	--
JAN								
03...	--	--	--	--	--	--	--	--
FEB								
10...	--	--	--	--	--	--	--	--
MAR								
02...	--	--	--	--	--	--	--	--
APR								
01...	251	207	.61	.04	1600	50	600	550
05...	--	--	--	--	--	--	--	--
MAY								
02...	498	413	.37	.07	1300	40	930	850
31...	--	--	--	--	--	--	--	--
JUN								
30...	--	--	--	--	--	--	--	--
AUG								
01...	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--
SEP								
01...	--	--	--	--	--	--	--	--

01601500 WILLS CREEK NEAR CUMBERLAND, MD

LOCATION.--Lat 39°40'07", long 78°47'18", Allegany County, Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland Railway bridge, 2.0 mi (3.2 km) upstream from Cumberland, and mouth.

DRAINAGE AREA.--247 mi² (640 km²).

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Cumberland"), October 1929 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1432: 1906, 1930(M), 1933-34(M), 1936-37, 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 640.89 ft (195.343 m) above mean sea level (Corps of Engineers bench mark). May 6, 1905, to July 14, 1906, nonrecording gage at highway bridge 700 ft (213 m) upstream at different datum. Oct. 18, 1929, to Mar. 17, 1936, water-stage recorder, and Apr. 1, 1936, to Mar. 19, 1937, nonrecording gage at site 200 ft (61 m) upstream at present datum.

REMARKS.--Records good except those for winter periods, which are fair. Records include drainage from numerous active and abandoned coal mines. An undetermined amount of water is diverted into the basin from Georges Creek basin by Hoffman drainage tunnel. Miscellaneous measurements of discharge from the Hoffman drainage tunnel have been made in the water years 1944, 1964-65, and 1967-77 by the U.S. Geological Survey, and in the water years 1958 and 1959 by the Maryland Geological Survey. See page . Slight diurnal fluctuation at low flow caused by quarry upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years (water years 1930-77), 319 ft³/s (9.034 m³/s), 17.54 in/yr (446 mm/yr).

EXTREMES FROM PERIOD OF RECORD.--Maximum discharge, 38,100 ft³/s (1,080 m³/s) Mar. 17, 1936, gage height, 20.2 ft (6.16 m), from floodmarks at present site, from rating curve extended above 6,500 ft³/s (184 m³/s) on basis of slope-area measurements at gage heights 13.45 ft (4.100 m) and 20.2 ft (6.16 m); minimum, 9 ft³/s (0.25 m³/s) Oct. 14, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1500	*7840	222	8.57	2.612	Mar. 13	1045	4120	117	6.66	2.030
Feb. 24	2315	4410	125	6.82	2.079						

Minimum discharge, 13 ft³/s (0.37 m³/s) Sept. 14, gage height, 1.38 ft (0.421 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	683	77	105	55	761	618	162	75	37	35	23
2	892	638	74	105	55	581	1540	161	69	35	30	24
3	580	587	72	104	55	467	1980	160	66	33	28	22
4	382	529	78	105	75	1710	1510	156	61	32	25	20
5	273	434	80	101	80	2310	1920	207	58	31	24	19
6	207	364	83	96	75	1450	1520	221	72	30	22	18
7	211	312	628	98	70	979	1150	597	81	33	22	17
8	1050	278	710	92	55	736	929	540	68	36	23	18
9	5670	243	549	93	51	596	747	436	76	40	25	17
10	2930	241	456	91	63	515	638	355	75	40	27	17
11	1250	219	444	90	101	453	552	294	66	52	25	16
12	766	200	430	90	175	434	471	248	58	73	27	15
13	556	181	417	90	432	2910	411	217	54	83	29	14
14	430	167	328	85	479	2110	369	201	60	60	34	14
15	331	160	345	80	387	1300	327	176	65	43	36	14
16	279	154	327	80	261	928	290	156	57	37	33	17
17	225	140	298	75	197	717	265	139	51	35	81	23
18	189	144	256	75	190	1260	244	131	59	35	99	26
19	163	136	218	75	225	1570	228	186	65	31	48	22
20	435	130	222	75	196	1200	226	147	58	420	35	21
21	1050	124	213	70	154	909	204	125	51	169	30	18
22	787	121	148	70	149	1380	191	113	45	98	35	17
23	594	111	140	70	281	1530	195	107	42	65	30	16
24	616	99	135	70	1750	1160	220	128	40	49	28	16
25	743	104	127	75	2990	843	196	107	40	52	26	18
26	1010	108	155	65	1720	677	183	99	68	55	24	45
27	878	112	149	65	1310	559	177	91	64	45	22	83
28	684	110	140	60	1010	1020	172	85	50	36	22	101
29	546	118	135	60	---	1160	197	82	46	33	21	60
30	455	92	89	55	---	961	172	79	40	42	22	42
31	755	---	105	55	---	770	---	76	---	41	24	---
TOTAL	26137	7039	7628	2520	12641	33956	17842	5982	1780	1901	992	793
MEAN	843	235	246	81.3	451	1095	595	193	59.3	61.3	32.0	26.4
MAX	5670	683	710	105	2990	2910	1980	597	81	420	99	101
MIN	163	92	72	55	51	434	172	76	40	30	21	14
CFSM	3.41	.95	1.00	.33	1.83	4.43	2.41	.78	.24	.25	.13	.11
IN.	3.94	1.06	1.15	.38	1.90	5.11	2.69	.90	.27	.29	.15	.12

CAL YR 1976 TOTAL 112466 MEAN 307 MAX 5670 MIN 23 CFSM 1.24 IN 16.94
WTR YR 1977 TOTAL 119211 MEAN 327 MAX 5670 MIN 14 CFSM 1.32 IN 1[illegible]

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD

LOCATION.--Lat 39°37'16", long 78"46'24", Allegany County, Hydrologic Unit 02070002, on left bank at downstream side of Wiley Ford Bridge, 2.0 mi (3.2 km) south of Cumberland, 2.1 mi (3.4 km) downstream from Wills Creek, and at mile 19.6 (31.5 km).

DRAINAGE AREA.--875 mi^2 (2,266 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to current year. Gage-height records collected at various sites about 2.0 mi (3.2 km) upstream from September 1901 to December 1932 and thereafter at present site, are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 726: Drainage area. WSP 781: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 585.22 ft (178.375 m) above mean sea level (Corps of Engineers bench mark). Prior to June 18, 1929, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Regulation by Stony River Reservoir, 79 mi (127 km) above station (see station 01595200), and since December 1950, by Savage River Reservoir, 39 mi (63 km) above station (see station 01597500). Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is below station. Diversion to Chesapeake and Ohio Canal prior to 1935. Gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 1,236 ft^3/s (35.00 m^3/s), 19.18 in/yr (487 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,200 ft^3/s (2,500 m^3/s) Mar. 17, 1936, gage height, 29.1 ft (8.87 m), from rating curve extended above 33,000 ft^3/s (935 m^3/s) on basis of slope-area measurement of peak flow; minimum (river only), 12 ft^3/s (0.34 m^3/s) Sept. 22, 1932, gage height, 2.38 ft (0.725 m); minimum daily (including flow in canal), 38 ft^3/s (1.08 m^3/s) Sept. 24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft (8.90 m) June 1, 1889, discharge, about 89,000 ft^3/s (2,520 m^3/s). Flood of Mar. 29, 1924, reached a stage of 28.4 ft (8.66 m), discharge, about 82,000 ft^3/s (2,320 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft^3/s (280 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	2215	*18200	515	15.00	4.572	Mar. 13	2100	11500	326	10.95	3.338
Feb. 25	0915	10400	295	10.26	3.127	Apr. 5	1400	10400	295	10.25	3.124

Minimum discharge, 124 ft^3/s (3.51 m^3/s) Sept. 3, 11, 12, 13; minimum daily, 129 ft^3/s (3.65 m^3/s) Sept. 3, 11-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2110	3250	567	455	235	4590	1900	569	266	180	161	141
2	2130	2370	602	450	235	3440	2530	520	248	161	152	140
3	1970	2070	564	435	240	2510	5040	505	225	147	147	129
4	1460	2330	491	419	270	4470	3860	484	208	138	147	143
5	896	2050	534	410	280	8560	8240	564	197	138	147	142
6	704	1410	513	401	270	5630	7050	640	225	138	142	143
7	655	1160	1650	400	250	4100	5480	1200	242	138	147	138
8	1980	1070	3270	390	230	3310	4150	1250	225	152	161	138
9	10800	986	2410	365	225	2810	3370	1020	248	152	310	137
10	10800	973	1990	355	240	2510	2840	848	446	166	267	134
11	5160	1100	1910	340	305	1890	2400	740	483	208	214	129
12	3870	995	2000	330	530	1670	2040	647	312	231	190	129
13	2930	899	2130	325	1010	7050	1750	581	248	254	197	129
14	2540	826	1280	320	1560	7400	1510	544	242	346	232	144
15	2070	802	1180	310	1370	5800	1310	646	260	290	426	143
16	1570	1200	1160	305	1050	4550	1130	517	344	208	394	143
17	1010	731	1550	300	811	3470	1010	454	248	166	340	154
18	862	697	1090	295	724	3540	924	421	231	152	316	147
19	760	685	885	290	809	4190	847	674	225	138	291	143
20	999	662	863	285	803	3560	789	816	225	530	203	144
21	3150	659	901	285	687	3340	746	707	202	311	170	148
22	2940	629	727	280	602	4040	712	676	254	219	175	193
23	2260	605	660	275	820	5140	688	635	231	186	166	162
24	1640	549	630	270	3290	4050	728	460	180	170	156	148
25	2560	555	557	265	9030	3290	740	527	166	180	156	149
26	3750	563	701	260	7550	2800	698	401	208	266	170	170
27	3590	644	660	255	6730	2120	651	354	350	405	166	236
28	2870	795	619	250	6070	2520	618	313	248	219	142	291
29	2420	787	676	245	---	3190	612	291	208	170	142	242
30	2110	737	896	240	---	2590	618	278	180	170	161	214
31	2950	---	500	235	---	2210	---	274	---	170	152	---
TOTAL	85516	32809	34166	10040	46226	120340	64981	18556	7575	6499	6340	4743
MEAN	2759	1094	1102	324	1651	3882	2166	599	253	210	205	158
MAX	10800	3250	3270	455	9030	8560	8240	1250	483	530	426	291
MIN	655	549	491	235	225	1670	612	274	166	138	142	129

CAL YR 1976 TOTAL 426452 MEAN 1165 MAX 10800 MIN 134 CFSM 1.33 IN 18.13
WTR YR 1977 TOTAL 437791 MEAN 1199 MAX 10800 MIN 129 CFSM 1.37 IN 18.61

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1964 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1964 to current year.

REMARKS.--Water temperatures are measured in field at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 33.0°C July 13, 14, 1966, July 16, 18, Aug. 19, 23, 1968, July 17, 1977; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,600 mg/L Feb. 13, 1966; minimum daily mean, 1 mg/L Jan. 17, 1975.
SEDIMENT LOADS: Maximum daily, 61,000 tons (55,300 tonnes) Mar. 6, 1967; minimum daily, 2.1 tons (1.9 tonnes) Aug. 27, 1971.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum daily, 33.0°C July 17; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 645 mg/L Feb. 25; minimum daily mean, 3 mg/L Dec. 20, 21, 23, 24, Jan. 3, May 16.
SEDIMENT LOADS: Maximum daily, 16,500 tons (15,000 tonnes) Feb. 25; minimum daily, 3.5 tons (3.2 tonnes) Jan. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)
OCT									
01...	1405	2480	240	7.3	--	14.0	10	85	46
21...	1145	3210	--	--	12.0	12.0	--	--	--
NOV									
01...	1400	3250	230	7.1	9.5	8.5	5	85	69
DEC									
02...	1130	562	380	7.7	-2.0	1.0	--	--	--
JAN									
03...	1130	435	460	8.2	-6.0	.0	5	160	130
25...	1200	269	--	--	-2.0	.0	--	--	--
FEB									
10...	1310	231	650	7.0	12.0	1.0	20	250	210
MAR									
02...	1235	3440	280	7.0	3.5	3.0	5	63	50
APR									
01...	1330	1890	260	7.5	15.0	10.5	5	85	63
MAY									
02...	1440	512	480	7.6	22.0	16.5	0	200	160
JUN									
02...	0850	248	750	7.3	19.0	20.5	60	280	240
30...	0905	169	750	7.4	21.0	23.0	30	300	270
AUG									
01...	1245	152	850	7.6	27.0	25.0	55	300	250
SEP									
01...	1140	152	1050	7.6	28.0	25.0	25	340	290
12...	0935	128	--	--	11.5	19.0	--	--	--

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
OCT									
01...	26	4.8	7.9	2.7	47	50	13	.1	6.1
21...	--	--	--	--	--	--	--	--	--
NOV									
01...	25	5.4	6.8	1.8	19	62	9.9	.1	5.4
DEC									
02...	--	--	--	--	--	--	--	--	--
JAN									
03...	46	11	14	1.8	41	110	26	.2	5.8
25...	--	--	--	--	--	--	--	--	--
FEB									
10...	77	15	40	4.5	55	220	52	.1	6.1
MAR									
02...	18	4.5	6.0	1.5	16	49	10	.0	5.7
APR									
01...	24	6.1	6.3	1.6	27	52	11	.1	5.7
MAY									
02...	58	13	16	2.3	42	150	27	.1	3.6
JUN									
02...	90	14	34	3.1	53	190	69	.1	5.7
30...	98	14	28	3.0	43	240	60	.1	5.8
AUG									
01...	100	13	48	5.2	70	200	46	.1	5.1
SEP									
01...	110	16	60	4.3	62	250	110	.2	3.9
12...	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT								
01...	144	134	.86	.32	5700	380	680	10
21...	--	--	--	--	--	--	--	--
NOV								
01...	137	127	.51	.05	1600	900	360	360
DEC								
02...	--	--	--	--	--	--	--	--
JAN								
03...	256	236	.65	.24	660	90	410	420
25...	--	--	--	--	--	--	--	--
FEB								
10...	463	442	.47	.12	930	50	680	600
MAR								
02...	124	103	.90	.03	880	40	220	220
APR								
01...	155	120	.75	.03	530	30	210	200
MAY								
02...	342	291	.32	.04	800	20	510	540
JUN								
02...	530	433	.46	.06	1000	60	520	460
30...	572	471	.68	.06	1200	50	640	360
AUG								
01...	560	502	.63	.06	1200	110	540	180
SEP								
01...	698	585	.35	.08	900	50	500	350
12...	--	--	--	--	--	--	--	--

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM
OCT								
09...	0930	7850	15.0	730	15500	44	64	79
FEB								
24...	2355	7500	--	861	17400	42	56	78
MAR								
04...	2350	8640	--	273	6370	16	25	34
13...	1930	11300	--	1027	31300	47	68	77

DATE	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM
OCT							
09...	82	96	98	100	--	--	--
FEB							
24...	84	91	94	95	96	98	99
MAR							
04...	41	47	57	62	69	82	88
13...	86	94	95	96	97	98	99

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	8.0	2.5	1.0	0.0	---	10.0	17.5	23.0	27.0	25.0	27.5
2	16.0	7.5	0.0	2.0	0.0	6.0	10.0	17.5	22.0	23.0	26.0	27.0
3	15.0	9.0	0.0	0.0	0.0	6.0	---	17.5	21.0	25.0	27.0	26.0
4	16.0	8.0	0.0	4.0	0.0	7.0	9.5	17.5	22.0	28.0	27.0	26.5
5	16.5	8.0	1.5	4.0	0.0	7.0	---	18.0	20.0	28.0	27.0	26.0
6	17.5	7.5	2.0	5.0	0.0	7.0	10.0	---	18.0	30.0	27.0	26.0
7	17.5	7.5	2.0	2.0	0.0	8.0	13.0	15.0	17.0	30.0	27.0	24.0
8	16.5	7.0	2.0	1.0	0.0	5.0	10.0	13.0	18.0	30.0	27.0	24.0
9	15.0	7.0	3.0	0.0	0.0	6.0	7.0	11.5	18.0	30.0	28.0	24.0
10	---	6.5	4.0	0.0	3.0	7.5	7.0	11.5	18.0	28.0	28.0	23.0
11	---	6.5	---	1.0	4.0	7.0	7.0	12.0	19.0	27.0	30.0	22.0
12	12.5	6.5	4.0	1.0	3.0	7.0	15.0	13.0	18.0	27.0	30.0	22.0
13	14.0	6.0	3.0	1.0	5.0	10.0	18.0	18.0	19.0	28.0	30.0	22.0
14	14.0	6.5	4.0	2.0	3.0	10.0	15.0	18.0	20.0	28.0	27.0	21.0
15	13.0	5.5	4.0	0.0	2.0	10.0	15.0	19.0	20.0	28.0	27.0	20.0
16	13.0	7.5	---	1.0	2.0	10.0	15.0	20.0	20.0	28.0	27.0	21.0
17	13.0	7.0	5.0	1.0	2.0	10.0	17.0	20.0	22.5	33.0	25.0	23.0
18	13.0	7.0	5.0	0.0	2.0	10.0	17.0	22.0	22.5	29.0	---	24.0
19	12.0	8.0	4.0	0.0	2.0	---	17.0	20.0	25.0	29.0	25.0	22.0
20	9.0	8.0	1.0	0.0	3.0	10.0	17.5	23.0	24.0	29.0	24.0	23.0
21	9.0	7.0	0.0	0.0	3.0	8.0	17.0	23.0	---	---	24.0	23.0
22	8.0	6.0	0.0	0.0	4.0	6.0	17.0	24.0	---	25.0	23.0	21.0
23	8.0	4.5	0.0	0.0	5.0	6.0	---	24.0	---	25.0	23.0	20.0
24	10.0	4.5	0.0	0.0	4.0	8.0	17.0	23.0	---	27.0	24.0	20.0
25	11.0	4.5	1.0	0.0	5.0	10.0	---	23.0	---	27.0	23.0	19.0
26	9.0	6.5	0.0	0.0	6.0	---	13.0	24.0	---	25.0	23.0	21.0
27	9.0	9.5	1.5	0.0	6.0	10.0	13.0	24.0	---	27.0	27.0	21.0
28	7.5	9.0	1.0	0.0	6.0	12.0	13.0	24.0	---	26.0	27.0	18.0
29	7.5	4.0	1.0	0.0	---	13.0	13.0	24.0	---	26.0	27.0	18.0
30	8.5	3.0	1.0	0.0	---	15.0	13.0	23.0	23.0	25.0	27.0	19.0
31	9.0	---	1.0	0.0	---	13.0	---	23.0	---	26.0	28.0	---

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTHATIO (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	161	928	44	397	6	9.2	8	9.8	23	15	125	1550
2	96	552	21	134	7	11	5	6.1	23	15	32	297
3	84	447	16	89	7	11	3	3.5	24	16	30	203
4	64	252	19	120	6	8.0	24	27	44	32	133	2140
5	29	70	18	100	21	30	25	28	62	47	221	5310
6	21	51	14	53	20	28	24	26	59	43	88	1340
7	44	96	14	45	10	50	32	35	61	41	50	553
8	156	839	12	35	51	426	33	35	59	37	29	259
9	326	10400	12	32	18	117	24	24	58	35	28	212
10	185	5490	13	34	12	64	27	26	57	37	25	169
11	108	1500	13	39	12	62	28	26	63	52	30	153
12	68	711	11	30	12	65	17	15	54	77	63	270
13	43	340	10	24	21	121	23	20	49	134	334	7830
14	37	254	8	18	18	62	22	19	58	244	138	2970
15	25	140	8	17	10	32	21	18	52	192	100	1570
16	12	51	8	26	9	28	24	20	46	130	85	1040
17	11	30	10	20	8	33	28	23	50	109	67	628
18	10	23	14	26	8	24	19	15	47	92	61	583
19	13	27	10	18	6	14	9	7.0	54	118	75	848
20	30	117	6	11	3	7.0	21	16	53	115	70	673
21	86	722	8	14	3	7.3	30	23	43	80	66	595
22	28	222	10	17	4	7.9	24	18	48	78	59	607
23	25	153	15	25	3	5.3	17	13	56	124	50	694
24	46	217	20	30	3	5.1	21	15	438	5730	55	601
25	102	678	18	27	4	6.0	27	19	645	16500	39	346
26	81	828	13	20	13	25	26	18	299	6050	19	144
27	42	407	9	16	19	34	22	15	238	4270	14	80
28	20	155	6	13	17	28	21	14	317	5220	33	252
29	19	124	8	17	16	29	22	15	---	---	137	1140
30	18	103	7	14	16	39	24	16	---	---	85	590
31	55	473	---	---	13	18	23	15	---	---	32	191
TOTAL	---	26400	---	1461	---	1406.8	---	580.4	---	39633	---	33838
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	26	133	11	17	16	11	22	11	27	12	40	15
2	43	334	11	15	16	11	25	11	21	8.6	24	9.1
3	87	1190	14	19	27	16	21	8.3	17	6.7	32	11
4	58	607	15	20	27	15	30	11	41	16	43	17
5	272	6580	16	24	20	11	52	19	87	35	62	24
6	108	2110	12	21	16	9.7	34	13	71	27	62	24
7	60	888	10	32	18	12	19	7.1	33	13	37	14
8	30	336	13	44	19	12	29	12	24	10	29	11
9	28	255	12	33	23	15	24	9.8	19	16	28	10
10	24	184	10	23	26	31	18	8.1	16	12	25	9.0
11	38	246	10	20	26	34	20	11	15	8.7	24	8.4
12	35	193	8	14	23	19	19	12	22	11	29	10
13	20	94	4	6.3	18	12	16	11	30	16	29	10
14	16	65	7	10	15	9.8	16	15	36	23	29	11
15	9	32	7	12	13	9.1	22	17	35	40	28	11
16	10	31	3	4.2	19	18	22	12	66	70	27	10
17	42	115	5	6.1	17	11	30	13	93	85	43	18
18	36	90	10	11	15	9.4	23	9.4	77	66	46	18
19	13	30	12	22	17	10	10	3.7	48	38	34	13
20	13	28	14	31	15	9.1	25	47	37	20	25	9.7
21	9	18	12	23	15	8.2	27	23	36	17	23	9.2
22	22	42	7	13	17	12	19	11	38	18	30	16
23	32	59	9	15	15	9.4	15	7.5	40	18	28	12
24	20	39	13	16	15	7.3	12	5.5	45	19	23	9.2
25	12	24	17	24	15	6.7	13	6.3	41	17	26	10
26	11	21	12	13	17	9.5	13	9.3	32	15	30	14
27	10	18	9	8.6	20	19	13	14	36	16	32	20
28	10	17	10	8.5	19	13	15	8.9	31	12	31	24
29	11	18	11	8.6	18	10	17	7.8	24	9.2	26	17
30	12	20	13	9.8	17	8.3	23	11	24	10	19	11
31	---	---	12	8.9	---	---	31	14	22	9.0	---	---
TOTAL	---	13817	---	533.0	---	388.5	---	379.7	---	694.2	---	405.6

TOTAL LOAD FOR YEAR: 119537.2 TONS.

01603500 EVITTS CREEK NEAR CENTERVILLE, PA

LOCATION.--Lat 39°47'23", long 78°38'48", Bedford County, Hydrologic Unit 02070002, on left bank 2.0 mi (3.2 km) upstream from Thomas W. Koon Dam, 3.0 mi (4.8 km) south of Centerville, 7.0 mi (11.3 km) upstream from Rock Gully Creek, and at mile 16.3 (26.2 km).

DRAINAGE AREA.--30.2 mi^2 (78.2 km^2).

PERIOD OF RECORD.--September 1932 to current year. Prior to October 1952, published as "near Bedford Valley."

REVISED RECORDS.--WSP 781: 1933(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,027.59 ft (313.209 m) above mean sea level (city of Cumberland bench mark).

REMARKS.--Records good except those for winter periods, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 31.7 ft^3/s (0.898 m^3/s), 14.25 in/yr (362 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,240 ft^3/s (148 m^3/s) Mar. 17, 1936, gage height, 7.13 ft (2.173 m), from rating curve extended above 400 ft^3/s (11.3 m^3/s) on basis of slope-area measurements at gage heights 4.64 ft (1.414 m) and 7.13 ft (2.173 m); minimum, 0.70 ft^3/s (0.020 m^3/s) Dec. 17, 1958, gage height, 0.79 ft (0.241 m), result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 8 ft (2.4 m), from floodmark, date unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	1830	447	12.7	2.87	0.875	Apr. 2	1330	461	13.1	2.89	0.881
Oct. 9	1645	1110	31.4	3.64	1.109	July 20	1245	*1310	37.1	3.84	1.170
Mar. 13	0715	461	13.1	2.89	0.881						

Minimum discharge, 3.3 ft^3/s (0.093 m^3/s) July 6, 7, gage height 1.12 ft (0.341 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	68	15	16	6.4	41	55	21	10	4.1	9.0	6.0
2	116	56	15	15	6.7	35	225	20	9.1	3.8	8.0	4.6
3	61	53	13	14	6.7	31	164	20	8.8	3.6	7.7	4.4
4	43	66	13	14	7.4	195	129	19	7.9	3.6	7.0	4.3
5	35	51	13	13	8.3	136	211	27	7.9	3.6	6.4	4.1
6	30	45	13	13	8.0	86	136	31	11	3.5	6.2	4.2
7	42	41	160	12	7.5	68	109	47	12	3.7	6.2	4.2
8	215	38	54	12	7.2	56	93	29	8.9	5.0	6.5	4.3
9	806	34	40	12	6.2	49	76	26	11	5.7	7.0	4.2
10	364	34	32	12	7.8	44	67	25	13	5.9	7.6	4.2
11	164	31	33	11	15	39	59	24	8.8	94	7.0	3.9
12	107	30	35	11	25	38	53	23	7.7	65	7.2	3.6
13	81	28	32	11	36	270	48	22	7.6	68	7.4	3.4
14	64	27	28	11	40	139	45	21	7.9	15	7.7	3.4
15	53	26	26	10	28	99	41	19	8.4	9.9	8.7	3.4
16	46	24	25	9.8	23	77	38	18	7.1	8.1	8.7	4.1
17	40	23	25	8.7	20	63	35	17	6.8	7.3	11	5.6
18	35	23	24	6.9	20	154	33	17	11	6.4	6.7	6.4
19	31	22	22	12	19	107	32	24	7.3	5.7	6.1	5.1
20	103	21	23	13	18	91	30	18	6.3	394	6.4	4.8
21	137	20	22	11	20	78	28	15	6.1	47	6.4	4.2
22	63	19	21	9.4	26	148	27	14	5.6	27	7.6	3.8
23	54	18	20	8.3	33	104	27	14	5.3	19	7.2	3.8
24	81	17	20	8.9	101	82	29	15	5.1	15	6.6	3.8
25	90	17	19	9.4	105	69	27	13	5.4	14	6.4	4.5
26	126	18	19	8.3	65	60	24	12	6.0	15	6.0	11
27	81	19	18	7.7	57	53	24	11	4.9	12	5.4	12
28	69	18	18	7.4	48	138	24	11	5.4	10	5.4	13
29	61	22	17	7.0	---	90	30	10	5.4	9.4	5.2	6.6
30	55	16	16	6.7	---	72	22	10	4.3	15	5.4	5.1
31	113	---	14	6.7	---	64	---	10	---	10	5.8	---
TOTAL	3643	925	845	328.2	771.2	2776	1941	603	232.0	909.3	215.9	156.0
MEAN	118	30.8	27.3	10.6	27.5	89.5	64.7	19.5	7.73	29.3	6.96	5.20
MAX	806	68	160	16	105	270	225	47	13	394	11	13
MIN	30	16	13	6.7	6.2	31	22	10	4.3	3.5	5.2	3.4
CFSM	3.91	1.02	.90	.35	.91	2.96	2.14	.65	.26	.97	.23	.17
IN.	4.49	1.14	1.04	.40	.95	3.42	2.39	.74	.29	1.12	.27	.19

CAL YR 1976 TOTAL 13201.4 MEAN 36.1 MAX 806 MIN 4.9 CFSM 1.20 IN 16.26
WTR YR 1977 TOTAL 13345.6 MEAN 36.6 MAX 806 MIN 3.4 CFSM 1.21 IN 16.44

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

LOCATION.--Lat 39°26'49", long 78°39'16", Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi (3.2 km) east of Springfield, and at mile 13.4 (21.6 km).

DRAINAGE AREA.--1,471 mi^2 (3,810 km^2).

PERIOD OF RECORD.--June 1894 to February 1896 (fragmentary), June 1899 to February 1902, August 1903 to July 1906, August 1928 to current year.

REVISED RECORDS.--WSP 1552: 1903-06, 1929-30(M), 1932-33(M), 1935(M), 1937-40(M), 1942-43(M), 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft (171.304 m) above mean sea level. June 1894 to February 1896, nonrecording gage at Baltimore & Ohio Railroad bridge 11.2 mi (18.0 km) upstream at different datum. June 26, 1899, to Feb. 2, 1902, nonrecording gage at bridge 10.0 mi (16.1 km) upstream at different datum. Aug. 28, 1903, to July 14, 1906, nonrecording gage at present site at different datum. Aug. 8 to Sept. 24, 1928, nonrecording gage at present site and datum.

REMARKS.--Records good except those for ice-affected days in December, January, and February, which are poor. National Weather service gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years (water years 1900-01, 1904-05, 1929-77), 1,273 ft^3/s (36.05 m^3/s), 11.75 in/yr (298 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft^3/s (4,050 m^3/s) Mar. 18, 1936, gage height, 34.2 ft (10.42 m), from rating curve extended above 28,000 ft^3/s (793 m^3/s) on basis of measurement made about 10 mi (16 km) upstream from station, adjusted for storage and inflow and slope-area measurement at gage height 29.84 ft (9.095 m); minimum, 29 ft^3/s (0.82 m^3/s) Jan. 28, 1956, result of freezeup, July 30, 1966, result of temporary dam; minimum gage height, 0.39 ft (0.119 m) July 30, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft (10.4 m), from floodmarks, discharge, 140,000 ft^3/s (3,960 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft^3/s (280 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	0915	*58300	1650	23.42	7.138	Apr. 6	0200	25500	722	16.58	5.054

Minimum discharge, 109 ft^3/s (3.08 m^3/s) Aug. 12, gage height, 1.33 ft (0.405 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	803	3650	1100	430	200	2650	1210	507	235	192	136	154
2	2290	3240	981	385	256	1880	1450	469	253	181	130	145
3	5370	2610	966	460	267	1420	1520	450	237	168	126	141
4	3920	2260	840	520	260	1350	1610	438	220	159	122	219
5	1860	1910	755	500	280	2190	13100	443	208	151	118	166
6	1130	1600	740	480	288	2940	17800	440	206	145	115	151
7	835	1370	1090	480	250	2450	8120	443	202	141	115	156
8	2860	1210	4020	435	240	1990	5370	452	201	136	118	145
9	24700	1110	3580	440	240	1610	3960	491	212	136	124	145
10	42500	1010	2540	440	253	1370	3070	465	229	143	117	149
11	10300	985	2040	400	270	1240	2530	434	285	134	111	151
12	5560	960	1800	310	290	1160	2110	415	328	176	111	143
13	3490	925	1700	290	350	4230	1760	395	277	263	122	136
14	2370	853	1550	270	490	12700	1520	385	256	225	130	132
15	1780	794	[illegible]	320	660	6810	1380	387	254	195	141	128
16	1430	783	[illegible]	330	570	4340	1250	366	246	184	147	126
17	1190	782	1200	296	450	3100	1120	344	245	166	151	128
18	1060	756	1110	225	360	2460	1020	330	252	145	168	126
19	956	746	992	220	375	2490	945	331	241	143	145	128
20	913	739	897	210	400	2230	878	325	213	136	134	126
21	1890	736	849	256	375	1950	831	308	202	128	132	132
22	3120	733	790	260	360	2310	767	291	197	122	132	132
23	2410	711	660	250	370	3780	708	275	190	117	130	128
24	1950	672	570	253	500	3480	674	268	188	113	130	136
25	1890	628	544	253	4300	2860	654	292	185	118	126	134
26	4150	608	630	256	4000	2330	641	318	192	132	128	134
27	3770	614	623	263	3000	1920	605	292	296	154	132	149
28	2830	657	601	267	3170	1800	576	271	313	161	161	331
29	2220	891	560	267	---	1750	567	253	253	184	149	260
30	1840	1080	470	225	---	1510	542	242	209	161	138	206
31	2100	---	420	231	---	1340	---	240	---	145	136	---
TOTAL	143487	35623	37228	10222	22824	85640	78288	11360	7025	4854	4075	4637
MEAN	4629	1187	1201	330	815	2763	2610	366	234	157	131	155
MAX	42500	3650	4020	520	4300	12700	17800	507	328	263	168	331
MIN	803	608	420	210	200	1160	542	240	185	113	111	126
CFSM	3.15	.81	.82	.22	.55	1.88	1.77	.25	.16	.11	.09	.11
IN.	3.63	.90	.94	.26	.58	2.17	1.98	.29	.18	.12	.10	.12

CAL YR 1976 TOTAL 475889 MEAN 1300 MAX 42500 MIN 109 CFSM .88 IN 12.03
WTR YR 1977 TOTAL 445263 MEAN 1220 MAX 42500 MIN 111 CFSM .83 IN 11.26

01609000 TOWN CREEK NEAR OLDTOWN, MD

LOCATION.--Lat 39°33'12", long 78°33'19", Allegany County, Hydrologic Unit 02070003, on left bank at downstream side of bridge on Pack Horse Trail (formerly Oldtown Road), 0.4 mi (0.6 km) northeast of Maryland State Highway 51, 2.0 mi (3.2 km) upstream from mouth of Sawpit Run, 3.0 mi (4.8 km) northeast of Oldtown, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--148 mi^2 (383 km^2).

PERIOD OF RECORD.--July 1928 to September 1935, June 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 547.97 ft (167.021 m) above mean sea level. July 1928 to September 1935, nonrecording gage on upstream side of highway bridge at datum 0.08 ft (0.024 m) lower.

REMARKS.--Records good except those for winter periods, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1929-35, 1968-77), 154 ft^3/s (4.361 m^3/s), 14.13 in/yr (359 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s (331 m^3/s) June 22, 1972, gage height, 14.13 ft (4.307 m); minimum, 0.9 ft^3/s (0.025 m^3/s) Aug. 2, 3, 7-14, 1930, gage height, 1.49 ft (0.454 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17 or 18, 1936, reached a stage of 19.08 ft (5.816 m), from floodmarks, discharge, 27,000 ft^3/s (765 m^3/s), from rating curve extended above 9,500 ft^3/s (269 m^3/s) on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 2	0315	2490	70.5	9.16	2.792
Oct. 10	0015	*6050	171	12.06	3.676
Mar. 5	0015	1900	53.8	8.02	2.444
Mar. 13	1815	2050	58.1	8.34	2.542
Apr. 2	Unknown	1840	52.1	7.88	2.402
July 20	2015	1630	46.2	7.46	2.274

Minimum discharge, 6.4 ft^3/s (0.18 m^3/s) July 5, 10, 11, gage height, 1.90 ft (0.579 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	437	40	46	20	179	259	68	23	8.8	23	12
2	1380	335	38	46	20	149	650	63	23	7.3	17	13
3	562	293	36	46	20	128	950	62	21	7.0	15	12
4	308	288	42	46	22	656	700	60	18	6.7	14	11
5	208	245	45	44	26	1240	1000	65	17	6.4	12	10
6	154	206	49	42	24	600	800	91	18	7.0	14	9.2
7	132	182	310	42	22	401	570	168	24	7.2	13	9.2
8	706	163	507	36	20	299	440	150	26	7.0	11	8.8
9	3890	144	275	40	18	239	331	117	24	7.1	11	8.4
10	2650	135	220	38	22	206	276	100	24	7.3	10	8.0
11	761	126	193	35	36	180	240	89	24	28	12	7.7
12	454	116	173	35	105	163	206	78	19	154	18	7.3
13	325	108	159	35	220	1190	180	70	17	117	16	7.3
14	253	99	115	34	215	1030	163	65	19	64	16	7.0
15	200	94	130	32	175	576	147	59	23	33	20	7.0
16	169	90	120	32	120	405	132	53	23	23	21	7.0
17	142	83	116	30	105	300	122	49	18	18	21	7.0
18	124	79	106	30	100	356	113	47	17	14	74	8.0
19	109	77	94	30	105	513	106	51	26	12	39	8.4
20	198	72	92	30	98	390	101	63	24	358	23	8.4
21	1020	69	89	28	80	368	93	46	31	309	17	7.7
22	509	66	80	28	70	731	86	39	17	136	15	7.3
23	328	61	70	28	105	896	84	35	14	70	16	7.0
24	308	57	63	28	210	544	101	33	12	45	15	7.0
25	542	56	60	28	560	379	95	32	12	37	15	7.0
26	876	55	76	26	550	299	82	31	11	44	13	7.7
27	583	55	75	26	345	237	76	28	15	41	12	10
28	395	56	68	24	220	427	71	26	12	28	11	16
29	304	58	60	24	---	618	87	23	11	22	9.9	24
30	248	56	42	22	---	435	82	22	9.2	21	9.8	18
31	448	---	48	21	---	339	---	22	---	25	9.7	---
TOTAL	19326	3961	3591	1032	3633	14473	8343	1905	572.2	1662.8	543.4	288.4
MEAN	623	132	116	33.3	130	467	278	61.5	19.1	53.6	17.5	9.61
MAX	3890	437	507	46	560	1240	1000	168	31	350	74	24
MIN	109	55	36	21	18	128	71	22	9.2	6.4	9.7	7.0
CFSM	4.21	.89	.78	.23	.88	3.16	1.88	.42	.13	.36	.12	.07
IN.	4.86	1.00	.90	.26	.91	3.64	2.10	.48	.14	.42	.14	.07

CAL YR 1976 TOTAL 67378.0 MEAN 184 MAX 3890 MIN 14 CFSM 1.24 IN 16.94
WTR YR 1977 TOTAL 59330.8 MEAN 163 MAX 3890 MIN 6.4 CFSM 1.10 IN 14.91

01610000. POTOMAC RIVER AT PAW PAW, WV

LOCATION.--Lat 39°32'13", long 78°27'28", Allegany County, Md., Hydrologic Unit 02070003, on left bank 250 ft (76 m) upstream from bridge on Maryland State Highway 51 at Paw Paw, 3.3 mi (5.3 km) downstream from Little Cacapon River, and at mile 277 (446 km).

DRAINAGE AREA.--3,109 mi^2 (8,052 km^2).

PERIOD OF RECORD.--October 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 487.88 ft (148.706 m) above mean sea level (Corps of Engineers bench mark). Prior to Mar. 25, 1939, nonrecording gage at bridge 250 ft (76 m) downstream at same datum.

REMARKS.--Records good except those for January and February, which are fair. Low flow affected by Stony River Reservoir (see station 01595200), and since December 1950, by Savage River Reservoir (see station 01597500). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--39 years, 3,183 ft^3/s (90.14 m^3/s), 13.90 in/yr (353 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft^3/s (3,140 m^3/s) Oct. 16, 1942, gage height, 38.36 ft (11.692 m); minimum, 164 ft^3/s (4.64 m^3/s) Sept. 10, 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 54.0 ft (16.46 m) Mar. 18, 1936, discharge, 240,000 ft^3/s (6,800 m^3/s), from rating curve extended above 85,000 ft^3/s (2,410 m^3/s) on basis of slope-area measurement of peak flow at site 5.0 mi (8.0 km) upstream at Okonoko, W. Va.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft^3/s (560 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	1015	*71100	2010	30.52	9.302	Apr. 6	0545	39700	1120	22.03	6.715
Mar. 14	1045	28800	816	18.61	5.672						

Minimum discharge, 273 ft^3/s (7.73 m^3/s) Aug. 7, gage height, 3.15 ft (0.960 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4470	8270	2160	843	560	8530	4540	1580	658	491	384	330
2	7220	7320	2000	1150	560	6590	6140	1470	638	465	354	362
3	9120	6090	1950	1140	570	5030	11100	1400	628	417	327	364
4	8070	5810	1780	1120	660	5800	8310	1370	572	383	310	344
5	4530	5270	1650	1100	720	14400	24200	1400	537	355	303	424
6	3100	4440	1690	1060	690	11300	33400	1530	562	346	288	363
7	2350	3690	2960	1040	650	8640	18000	1870	569	344	279	372
8	5860	3300	8300	1020	620	6940	12300	2380	567	337	287	357
9	38800	2990	7680	980	590	5790	9180	2140	577	348	315	332
10	65500	2780	5860	960	625	5080	7400	1880	615	347	483	330
11	24200	2760	5060	940	765	4410	6340	1660	931	383	427	329
12	12500	2730	4730	920	1140	3870	5510	1520	910	580	383	314
13	8490	2540	4730	890	1890	11100	4800	1390	760	736	371	302
14	6480	2360	4010	870	3060	25800	4260	1310	659	766	395	301
15	5280	2200	3470	850	3580	16200	3840	1300	708	772	481	307
16	4360	2380	3330	830	3180	11400	3430	1290	687	580	711	303
17	3470	2300	3390	810	2290	8130	3090	1140	709	476	588	307
18	2870	2000	3180	790	1890	7070	2810	1060	641	407	717	323
19	2520	1950	2610	770	1960	8700	2590	1190	617	356	616	309
20	2510	1910	2390	760	2130	7340	2400	1400	600	453	499	304
21	7140	1870	2340	740	1560	6520	2250	1380	597	1650	402	301
22	7790	1840	2140	740	1340	7960	2110	1280	509	735	375	313
23	6230	1770	1810	720	1530	12300	1970	1180	559	504	375	368
24	5090	1680	1780	700	2740	9990	2050	908	494	400	359	329
25	6100	1590	1590	680	12600	8060	2010	1020	456	381	348	327
26	11300	1560	1750	660	13400	6720	1860	995	436	474	328	344
27	10300	1590	1830	650	10700	5470	1760	889	530	606	350	390
28	7730	1760	1700	630	10000	5520	1680	799	866	587	350	569
29	6260	2030	1690	620	---	7370	1720	728	706	467	364	767
30	5330	2230	1700	600	---	6090	1720	680	562	447	347	597
31	6010	---	1590	570	---	5210	---	663	---	412	354	---
TOTAL	300980	91010	92850	26153	82000	263330	192770	40802	18860	16005	12470	10982
MEAN	9709	3034	2995	844	2929	8495	6426	1316	629	516	402	366
MAX	65500	8270	8300	1150	13400	25800	33400	2380	931	1650	717	767
MIN	2350	1560	1590	570	560	3870	1680	663	436	337	279	301

CAL YR 1976 TOTAL 1188318 MEAN 3247 MAX 65500 MIN 324 CFSM 1.04 IN 14.21
WTR YR 1977 TOTAL 1148212 MEAN 3146 MAX 65500 MIN 279 CFSM 1.01 IN 13.73

01610155 SIDELING HILL CREEK NEAR BELLEGROVE, MD

LOCATION.--Lat 39°38'58", long 78°20'40", Washington County, Hydrologic Unit 02070003, on left bank at bridge on Pearre Road, 1.2 mi (1.9 km) upstream from mouth, and 4.0 mi (6.4 km) south of Bellegrove.

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--July 1967 to September 1977 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 440.41 ft (134.237 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are fair to poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years, 121 ft³/s (3.427 m³/s), 16.11 in/yr (409 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) June 22, 1972, gage height, 12.44 ft (3.792 m); minimum, no flow for many days in August and September 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft³/s (31 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 1	1800	6310	179	8.49	2.588	Apr. 2	2100	1540	43.6	4.25	1.295
Oct. 9	1815	*6410	182	8.55	2.606	Apr. 5	1015	1240	35.1	3.82	1.164
Mar. 4	2200	1810	51.3	4.61	1.405	July 11	1430	2460	69.7	5.36	1.634
Mar. 13	1445	2060	58.3	4.91	1.497	July 20	1415	3570	101	6.43	1.960
Mar. 22	2045	1470	41.6	4.15	1.265						

Minimum discharge, 0.04 ft³/s (0.001 m³/s) July 9; minimum daily, 0.08 ft³/s (0.002 m³/s) July 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3500	351	21	25	6.2	133	177	33	4.9	1.6	16	5.7
2	1620	271	19	23	6.2	107	507	30	4.6	1.4	12	6.3
3	656	240	15	21	6.6	87	903	29	4.3	.99	9.4	14
4	350	232	18	19	7.0	510	451	28	3.9	.79	7.9	8.3
5	235	199	16	16	7.4	1040	1040	28	3.5	.60	7.8	7.3
6	170	165	16	15	7.8	421	663	39	3.8	.26	6.8	6.2
7	131	141	225	15	7.0	274	345	84	4.0	.15	5.5	6.8
8	346	120	370	14	6.4	207	253	86	6.3	.15	4.6	23
9	4010	100	285	14	5.8	160	187	67	8.8	.08	4.1	14
10	1530	91	225	13	5.6	134	151	56	8.7	.18	4.1	10
11	488	80	160	12	14	115	127	47	7.9	169	5.7	8.0
12	264	69	133	11	60	101	105	39	7.5	247	7.8	6.3
13	196	61	119	11	140	1050	87	32	6.7	157	11	5.1
14	158	54	105	10	125	841	81	28	5.9	76	9.6	4.1
15	120	50	92	9.8	86	357	73	25	6.4	41	9.9	3.6
16	95	46	87	9.6	62	249	64	21	6.3	26	14	3.2
17	74	40	80	9.2	46	136	57	18	6.6	17	45	3.1
18	60	37	70	9.0	42	186	53	17	15	13	87	3.0
19	48	36	60	8.6	38	263	49	19	20	11	40	2.7
20	86	36	55	8.2	37	230	45	29	13	1090	24	2.7
21	544	33	53	7.9	32	220	41	20	10	369	17	2.7
22	322	31	48	7.8	27	643	38	15	7.3	154	13	2.7
23	221	28	44	7.6	32	909	36	12	5.3	75	12	2.8
24	192	24	40	7.4	105	418	45	12	4.0	46	10	2.8
25	263	23	35	7.2	324	264	48	10	3.3	39	11	2.7
26	547	23	40	7.0	260	196	40	9.6	2.9	63	8.6	3.0
27	433	23	44	6.8	216	152	36	8.6	2.3	40	6.9	2.9
28	278	23	45	6.6	181	270	34	7.7	2.4	25	5.8	5.2
29	211	24	42	6.6	---	454	39	6.9	2.6	19	4.8	12
30	171	24	29	6.4	---	321	41	5.9	2.1	16	4.1	11
31	319	---	28	6.2	---	241	---	5.3	---	17	3.6	---
TOTAL	17638	2675	2619	350.9	1893.0	10739	5816	868.0	190.3	2716.20	429.0	191.2
MEAN	569	89.2	84.5	11.3	67.6	346	194	[illegible]	6.34	87.6	13.8	6.37
MAX	4010	351	370	25	324	1050	1040	[illegible]	20	1090	87	23
MIN	48	23	15	6.2	5.6	87	34	5.3	2.1	.08	3.6	2.7
CFSM	5.58	.88	.83	.11	.66	3.39	1.90	.28	.06	.86	.14	.06
IN.	6.43	.98	.96	.13	.69	3.92	2.12	.32	.07	.99	.16	.07

CAL YR 1976 TOTAL 49348.00 MEAN 135 MAX 4010 MIN 3.2 CFSM 1.32 IN 18.00
WTR YR 1977 TOTAL 46125.60 MEAN 126 MAX 4010 MIN .08 CFSM 1.24 IN 16.82

01613000 POTOMAC RIVER AT HANCOCK, MD

LOCATION.--Lat 39°41'49", long 78°10'39", Washington County, Hydrologic Unit 02070004, on left bank 0.2 mi (0.3 km) downstream from Little Tonoloway Creek, 0.5 mi (0.8 km) downstream from bridge on U.S. Highway 522 at Hancock, 1.1 mi (1.8 km) upstream from Tonoloway Creek (formerly called Great or Big Tonoloway Creek), and at mile 239 (385 km).

DRAINAGE AREA.--4,073 mi² (10,549 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1932 to current year. Gage-height records collected at same site since June 1925 are contained in reports of U.S. Weather Service.

REVISED RECORDS.--WSP 781: 1933(M). WSP 801: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 383.68 ft (116.946 m) above mean sea level. Oct. 1, 1932, to Jan. 5, 1935, Mar. 18, 1936, to Jan. 20, 1937, nonrecording gage, on former highway bridge just upstream at same datum.

REMARKS.--Water-discharge records good except those for January and February, which are fair. Slight regulation at low flow from power plants upstream. Low flow affected slightly by Stony River Reservoir (see station 01595200) and since December 1950, by Savage River Reservoir (see station 01597500). Gage-height telemeter at station.

AVERAGE DISCHARGE.--45 years, 4,052 ft³/s (114.8 m³/s), 13.51 in/yr (343 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 340,000 ft³/s (9,630 m³/s) Mar. 18, 1936, gage height, 47.6 ft (14.508 m), from rating curve extended above 120,000 ft³/s (3,400 m³/s) on basis of slope-area measurement of peak flow; minimum observed, 180 ft³/s (5.10 m³/s) Oct. 4, 1932, gage height, 2.01 ft (0.613 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1932, about 40 ft (12.2 m) in May 1889, discharge, about 220,000 ft³/s (6,230 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft³/s (650 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 10	1400	*96700	2740	28.56	8.705	Apr. 6	0645	47600	1350	19.52	5.950
Mar. 14	1545	34700	983	16.43	5.008						

Minimum discharge, 340 ft³/s (9.63 m³/s) Aug. 9, gage height, 2.40 ft (0.732 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7280	9800	2510	1800	720	9980	6050	2070	750	667	503	479
2	12100	9930	2370	1100	720	7970	6240	1900	742	577	466	473
3	13500	8180	2190	1400	770	6230	14200	1780	726	534	428	510
4	15000	7410	2260	1380	810	5710	11600	1700	706	495	404	508
5	8350	6930	2050	1350	880	14200	22700	1680	648	459	383	439
6	5200	6000	1900	1310	890	14400	44700	1750	640	430	370	522
7	3780	4900	2610	1260	870	10900	25700	1920	646	410	356	520
8	4140	4260	8220	1200	850	8670	16500	2430	661	407	349	490
9	36000	3820	10800	1180	760	7170	12400	2600	667	411	342	482
10	89800	3510	8120	1150	715	6130	9610	2350	667	408	364	430
11	47100	3310	6610	1130	770	5430	8150	2110	700	711	491	408
12	17700	3300	5890	1110	1130	4610	7110	1900	1010	1040	502	399
13	11700	3130	5600	1090	1880	7230	6140	1740	995	898	474	393
14	8640	2930	5260	1070	2710	30000	5410	1610	867	947	454	383
15	6920	2730	4260	1050	3630	22900	4810	1510	827	971	467	370
16	5650	2580	4030	1020	3720	15100	4330	1510	808	933	515	375
17	4630	2860	3830	990	3120	11000	3880	1450	787	728	883	382
18	3680	2500	3990	970	2550	8650	3580	1320	875	592	893	372
19	3220	2350	3370	950	2200	9520	3250	1280	752	507	853	384
20	3030	2310	2970	930	2230	9360	3060	1410	713	1400	734	401
21	6350	2250	2800	910	2140	8060	2870	1580	784	1640	613	375
22	10200	2200	2700	890	1970	9160	2700	1520	704	1730	517	376
23	8610	2140	2520	870	1850	17000	2530	1430	614	938	473	378
24	6900	2070	2260	850	2200	14600	2450	1310	616	651	458	420
25	7210	1960	2050	830	8360	11200	2510	1060	586	561	450	424
26	13300	1870	2050	810	15400	8990	2390	1110	541	567	421	401
27	16500	1860	2250	800	12300	7480	2250	1090	510	607	405	419
28	11600	1920	2190	780	10900	6640	2130	998	564	678	396	688
29	8840	2140	2150	760	---	9250	2110	911	920	692	423	819
30	7280	2370	1980	750	---	8630	2130	827	791	573	512	953
31	7180	---	2200	730	---	7080	---	774	---	541	512	---
TOTAL	411390	113520	113990	32420	87045	323250	243490	48630	21817	22703	15411	13973
MEAN	13270	3784	3677	1046	3109	10430	8116	1569	727	732	497	466
MAX	89800	9930	10800	1800	15400	30000	44700	2600	1010	1730	893	953
MIN	3030	1860	1900	730	715	4610	2110	774	510	407	342	370
CFSM	3.26	.93	.90	.26	.76	2.56	1.99	.39	.18	.18	.12	.11
IN.	3.76	1.04	1.04	.30	.80	2.95	2.22	.44	.20	.21	.14	.13

CAL YR 1976 TOTAL 1512461 MEAN 4132 MAX 89800 MIN 425 CFSM 1.01 IN 13.81
WTR YR 1977 TOTAL 1447639 MEAN 3966 MAX 89800 MIN 342 CFSM .97 IN 13.22

01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-72, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT									
07...	1425	3640	220	7.5	--	16.0	--	--	--
13...	1225	11600	--	--	16.0	12.0	--	--	--
DEC									
23...	1005	2600	260	7.8	-2.0	.0	--	--	--
JAN									
21...	1545	910	--	--	.0	.0	--	--	--
FEB									
03...	1245	673	--	--	5.5	.0	--	--	--
MAR									
21...	1355	7990	180	7.6	--	6.0	--	--	--
APR									
13...	1235	6280	225	7.7	28.0	14.5	5	92	54
22...	0945	2670	--	--	23.0	18.5	--	--	--
MAY									
27...	1425	1080	310	7.9	27.0	26.0	--	--	--
JUN									
23...	1000	616	460	7.9	18.5	21.5	--	--	--
JUL									
07...	1245	414	440	7.1	32.0	30.5	10	180	110
AUG									
23...	1220	471	400	8.1	20.0	23.0	--	--	--
SEP									
22...	1145	379	580	8.0	17.0	20.0	--	--	--

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT									
07...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
DEC									
23...	--	--	--	--	--	--	--	--	--
JAN									
21...	--	--	--	--	--	--	--	--	--
FEB									
03...	--	--	--	--	--	--	--	--	--
MAR									
21...	--	--	--	--	--	--	--	--	--
APR									
13...	28	5.4	4.8	1.5	46	42	7.5	.0	5.5
22...	--	--	--	--	--	--	--	--	--
MAY									
27...	--	--	--	--	--	--	--	--	--
JUN									
23...	--	--	--	--	--	--	--	--	--
JUL									
07...	57	9.4	15	2.2	81	94	27	.1	1.8
AUG									
23...	--	--	--	--	--	--	--	--	--
SEP									
22...	--	--	--	--	--	--	--	--	--

01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT								
07...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
DEC								
23...	--	--	--	--	--	--	--	--
JAN								
21...	--	--	--	--	--	--	--	--
FEB								
03...	--	--	--	--	--	--	--	--
MAR								
21...	--	--	--	--	--	--	--	--
APR								
13...	131	117	.57	.02	660	20	80	50
22...	--	--	--	--	--	--	--	--
MAY								
27...	--	--	--	--	--	--	--	--
JUN								
23...	--	--	--	--	--	--	--	--
JUL								
07...	327	246	.01	.00	90	10	30	10
AUG								
23...	--	--	--	--	--	--	--	--
SEP								
22...	--	--	--	--	--	--	--	--

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD

LOCATION.--Lat 39°42'57", long 77°49'28", Washington County, Hydrologic Unit 02070004, on right bank 0.7 mi (1.1 km) upstream from highway bridge in Fairview, 2.0 mi (3.2 km) upstream from Rockdale Run, 6.5 mi (10.5 km) northwest of Hagerstown, and 19.1 mi (30.7 km) upstream from mouth.

DRAINAGE AREA.--494 mi^2 (1,279 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1432: 1929(M), 1930, 1931-32(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 391.85 ft (119.436 m) above mean sea level. Prior to Dec. 6, 1932, nonrecording gage at highway bridge 0.7 mi (1.1 km) downstream at datum 2.93 ft (0.893 m) lower. Dec. 6, 1932, to Oct. 7, 1933, nonrecording gage 150 ft (46 m) downstream from former site at datum 4.92 ft (1.500 m) lower than present datum.

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Low flow partly regulated by small powerplants near Mercersburg, PA.

AVERAGE DISCHARGE.--49 years, 584 ft^3/s (16.54 m^3/s), 16.05 in/yr (408 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft^3/s (918 m^3/s) June 23, 1972, gage height, 24.5 ft (7.47 m), from floodmark, from rating curve extended above 15,000 ft^3/s (425 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 21 ft^3/s (0.59 m^3/s) Aug. 8, Sept. 12, 1966; minimum daily, 25 ft^3/s (0.71 m^3/s) Nov. 28, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1928, about 16.5 ft (5.03 m), present datum, sometime in 1889, from information by local residents; discharge, about 22,000 ft^3/s (620 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,300 ft^3/s (120 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	1800	5780	164	8.75	2.667	Mar. 22	2145	5610	159	8.62	2.627
Oct. 9	2245	*18000	510	16.00	4.877	Apr. 2	2245	4340	123	7.53	2.295
Mar. 14	0300	4670	132	7.83	2.387	Apr. 5	1145	4760	135	7.91	2.411

Minimum discharge, 81 ft^3/s (2.29 m^3/s) Sept. 16, gage height, 1.44 ft (0.439 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4010	1890	294	240	155	488	1010	418	178	132	99	109
2	2600	1390	304	240	155	428	1930	397	176	126	97	102
3	1680	1220	269	235	160	387	3140	393	169	120	93	139
4	1320	1250	292	225	175	848	1990	380	162	118	91	102
5	909	1080	295	220	185	3200	4050	422	158	120	90	101
6	699	955	296	215	155	1710	2970	443	169	120	88	101
7	571	869	1260	230	150	1250	2050	426	187	124	86	119
8	1020	800	1570	210	150	1010	1740	393	190	143	87	117
9	11300	732	858	205	150	849	1450	346	182	145	92	108
10	12600	692	693	220	160	748	1270	334	224	145	92	102
11	4350	652	618	200	225	665	1130	320	216	150	121	99
12	2300	606	584	200	505	605	1030	308	192	278	118	93
13	1690	564	545	195	755	2470	915	298	174	268	117	89
14	1380	531	454	195	755	3450	850	284	169	178	118	87
15	1160	510	435	190	615	1910	776	277	174	145	118	87
16	992	487	429	185	385	1490	721	264	178	122	111	84
17	866	463	419	185	275	1210	677	257	174	114	155	88
18	777	448	399	180	225	1180	628	254	221	132	186	90
19	695	436	372	180	235	1370	602	267	216	134	147	89
20	805	411	362	180	250	1110	571	260	180	244	117	96
21	1900	399	350	175	215	1240	536	239	174	273	109	104
22	1370	387	310	175	215	2840	512	227	162	208	105	107
23	1050	369	325	165	250	4360	498	218	152	164	113	95
24	989	352	310	170	395	2310	661	213	145	146	109	88
25	1420	343	295	185	939	1720	677	210	138	147	105	86
26	2080	339	315	180	817	1430	551	207	162	183	102	98
27	1700	336	315	175	640	1230	488	194	152	147	101	122
28	1330	333	305	165	571	1470	457	187	147	127	99	141
29	1140	348	290	160	---	1710	498	180	169	115	97	126
30	1010	347	250	155	---	1340	470	176	147	109	112	109
31	1780	---	240	155	---	1160	---	174	---	105	101	---
TOTAL	67493	19539	14053	5990	9862	47188	34848	8966	5237	4782	3376	3078
MEAN	2177	651	453	193	352	1522	1162	289	175	154	109	103
MAX	12600	1890	1570	240	939	4360	4050	443	224	278	186	141
MIN	571	333	240	155	150	387	457	174	138	105	86	84
CFSM	4.41	1.32	.92	.39	.71	3.08	2.35	.59	.35	.31	.22	.21
IN.	5.08	1.47	1.06	.45	.74	3.55	2.62	.68	.39	.36	.25	.23

CAL YR 1976 TOTAL 246644 MEAN 674 MAX 12600 MIN 100 CFSM 1.36 IN 18.57
WTR YR 1977 TOTAL 224412 MEAN 615 MAX 12600 MIN 84 CFSM 1.25 IN 16.90

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1966 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1966 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 30.0°C July 17, 1969; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,050 mg/L Oct. 25, 1971; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 73,000 tons (66,200 tonnes) June 23, 1972; minimum daily, 0.17 ton (0.15 tonne) Nov. 24, 26, 27, 1966.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum daily, 25.0°C July 19, 21, 22, 24, minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 425 mg/L Oct. 1; minimum daily mean, 1 mg/L on many days during year.
SEDIMENT LOADS: Maximum daily, 9,400 tons (8,530 tonnes) Oct. 9; minimum daily, 0.43 ton (0.39 tonne) June 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT									
07...	0940	593	320	7.6	16.0	14.0	--	--	--
27...	1410	1600	--	--	5.5	8.0	--	--	--
NOV									
17...	1140	465	360	8.3	8.0	4.5	--	--	--
JAN									
21...	1310	175	--	--	-3.0	.0	--	--	--
FEB									
24...	1030	358	350	8.1	11.5	4.0	0	160	34
APR									
12...	1300	1010	310	8.2	30.0	15.0	5	160	50
MAY									
26...	1100	220	415	8.0	21.0	20.0	--	--	--
JUL									
13...	1305	245	340	7.7	30.0	25.0	30	150	31
AUG									
23...	0935	115	390	8.0	19.5	21.0	--	--	--

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT									
07...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
NOV									
17...	--	--	--	--	--	--	--	--	--
JAN									
21...	--	--	--	--	--	--	--	--	--
FEB									
24...	46	10	7.6	2.3	149	21	12	.1	3.3
APR									
12...	47	9.5	4.6	1.9	130	18	8.0	.1	4.7
MAY									
26...	--	--	--	--	--	--	--	--	--
JUL									
13...	42	10	7.0	4.2	140	21	11	.1	6.7
AUG									
23...	--	--	--	--	--	--	--	--	--

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT								
07...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
NOV								
17...	--	--	--	--	--	--	--	--
JAN								
21...	--	--	--	--	--	--	--	--
FEB								
24...	186	176	2.1	.16	300	20	20	20
APR								
12...	164	158	3.2	.06	500	30	30	10
MAY								
26...	--	--	--	--	--	--	--	--
JUL								
13...	203	171	2.9	.32	4400	50	120	10
AUG								
23...	--	--	--	--	--	--	--	--

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT									
01...	1920	4090	384	4240	64	73	86	96	100

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	10.0	8.0	4.0	3.0	10.0	9.0	11.0	20.0	22.0	22.0	21.0
2	15.0	11.0	7.0	3.0	2.0	10.0	9.0	11.0	20.0	22.0	21.0	20.0
3	12.0	11.0	7.0	3.0	2.0	10.0	9.0	---	19.0	22.0	22.0	20.0
4	---	---	7.0	3.0	3.0	11.0	9.0	---	19.0	22.0	22.0	19.0
5	12.0	---	8.0	3.0	2.0	11.0	10.0	---	19.0	22.0	21.0	19.0
6	12.0	---	6.0	2.0	2.0	10.0	10.0	---	20.0	22.0	22.0	19.0
7	11.0	11.0	6.0	2.0	2.0	10.0	10.0	---	20.0	22.0	21.0	19.0
8	12.0	10.0	7.0	1.0	2.0	10.0	10.0	---	20.0	22.0	21.0	19.0
9	12.0	10.0	7.0	1.0	2.0	10.0	9.0	---	20.0	22.0	21.0	19.0
10	11.0	10.0	7.0	1.0	3.0	9.0	9.0	12.0	21.0	22.0	21.0	19.0
11	---	10.0	7.0	1.0	3.0	9.0	9.0	12.0	21.0	22.0	22.0	19.0
12	13.0	9.0	7.0	2.0	3.0	9.0	10.0	12.0	21.0	22.0	22.0	19.0
13	11.0	9.0	7.0	2.0	3.0	9.0	10.0	12.0	21.0	22.0	21.0	19.0
14	11.0	---	---	2.0	5.0	9.0	10.0	15.0	21.0	22.0	21.0	19.0
15	10.0	9.0	7.0	2.0	6.0	9.0	9.0	19.0	21.0	22.0	21.0	19.0
16	11.0	10.0	7.0	2.0	6.0	9.0	8.0	19.0	21.0	---	20.0	19.0
17	11.0	9.0	6.0	2.0	9.0	9.0	8.0	20.0	21.0	---	20.0	19.0
18	11.0	9.0	5.0	2.0	9.0	9.0	8.0	18.0	21.0	22.0	20.0	19.0
19	11.0	9.0	2.0	1.0	9.0	9.0	11.0	18.0	21.0	22.0	20.0	19.0
20	12.0	9.0	---	1.0	9.0	9.0	11.0	18.0	21.0	22.0	20.0	19.0
21	11.0	8.0	5.0	1.0	9.0	9.0	20.0	19.0	21.0	22.0	20.0	18.0
22	11.0	8.0	4.0	3.0	9.0	9.0	19.0	19.0	21.0	21.0	20.0	18.0
23	11.0	8.0	4.0	1.0	9.0	9.0	18.0	20.0	21.0	21.0	20.0	18.0
24	---	8.0	4.0	1.0	9.0	---	18.0	20.0	21.0	21.0	21.0	19.0
25	11.0	---	---	2.0	9.0	9.0	11.0	20.0	21.0	22.0	21.0	19.0
26	11.0	7.0	3.0	2.0	10.0	9.0	10.0	19.0	22.0	22.0	22.0	19.0
27	11.0	7.0	3.0	2.0	10.0	9.0	9.0	19.0	22.0	22.0	22.0	19.0
28	13.5	7.0	3.0	3.0	10.0	9.0	9.0	20.0	22.0	22.0	22.0	19.0
29	10.0	7.0	4.0	3.0	10.0	9.0	10.0	20.0	22.0	22.0	21.0	19.0
30	11.0	8.0	4.0	3.0	---	9.0	11.0	19.0	22.0	22.0	21.0	19.0
31	10.0	---	4.0	3.0	---	9.0	---	19.0	---	22.0	21.0	---

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	9.0	5.0	1.0	---	3.0	10.0	17.0	20.0	20.0	23.0	23.0
2	16.0	9.0	4.0	1.0	---	3.0	10.0	17.0	21.0	21.0	23.0	23.0
3	15.0	9.0	4.0	2.0	---	3.0	10.0	17.0	20.0	21.0	23.0	23.0
4	15.0	9.0	---	2.0	---	3.0	10.0	18.0	20.0	21.0	23.0	21.0
5	15.0	9.0	4.0	2.0	---	3.0	10.0	19.0	20.0	21.0	24.0	22.0
6	15.0	8.0	5.0	1.0	---	4.0	10.0	18.0	20.0	21.0	25.0	22.0
7	14.0	8.0	5.0	2.0	---	4.0	10.0	17.0	20.0	21.0	25.0	---
8	14.0	8.0	3.0	1.0	---	4.0	10.0	19.0	20.0	21.0	25.0	23.0
9	14.0	8.0	4.0	1.0	---	4.0	10.0	19.0	20.0	21.0	25.0	20.0
10	14.0	8.0	4.0	1.0	---	---	10.0	19.0	20.0	21.0	25.0	21.0
11	13.0	8.0	4.0	1.0	---	5.0	10.0	19.0	20.0	21.0	24.0	19.0
12	14.0	7.0	4.0	1.0	---	5.0	10.0	19.0	20.0	22.0	25.0	16.0
13	14.0	7.0	3.0	1.0	---	9.0	10.0	19.0	21.0	21.0	23.0	19.0
14	13.0	7.0	3.0	1.0	---	10.0	11.0	19.0	20.0	22.0	23.0	21.0
15	12.0	7.0	3.0	1.0	---	10.0	10.0	19.0	20.0	22.0	22.0	18.0
16	12.0	6.0	4.0	---	---	---	14.0	20.0	20.0	22.0	22.0	18.0
17	10.0	4.0	4.0	1.0	---	10.0	14.0	19.0	20.0	25.0	24.0	19.0
18	9.0	6.0	4.0	---	---	10.0	11.0	20.0	21.0	24.0	21.0	20.0
19	9.0	7.0	3.0	---	2.0	10.0	11.0	20.0	21.0	25.0	19.0	21.0
20	9.0	7.0	3.0	---	2.0	---	12.0	20.0	21.0	24.0	19.0	23.0
21	9.0	7.0	3.0	0.0	2.0	10.0	12.0	20.0	21.0	25.0	18.0	20.0
22	9.0	7.0	2.0	---	2.0	9.0	16.0	20.0	21.0	25.0	20.0	18.0
23	9.0	---	2.0	---	1.0	8.0	17.0	20.0	22.0	24.0	20.0	18.0
24	9.0	5.0	2.0	---	2.0	9.0	17.0	21.0	20.0	25.0	21.0	19.0
25	9.0	5.0	2.0	---	3.0	9.0	17.0	20.0	20.0	24.0	---	19.0
26	9.0	5.0	2.0	---	3.0	9.0	16.0	20.0	21.0	22.0	17.0	17.0
27	9.0	5.0	2.0	---	3.0	9.0	17.0	20.0	20.0	20.0	18.0	17.0
28	9.0	6.0	2.0	---	3.0	---	17.0	21.0	21.0	20.0	20.0	17.0
29	9.0	6.0	2.0	---	---	9.0	17.0	20.0	21.0	21.0	22.0	15.0
30	9.0	5.0	2.0	---	---	10.0	16.0	20.0	20.0	21.0	23.0	15.0
31	9.0	---	1.0	---	---	10.0	---	19.0	---	22.0	23.0	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	425	4710	50	255	5	4.0	8	5.2	2	0.84	33	43
2	78	610	29	109	5	4.1	5	3.2	2	0.84	31	36
3	126	572	14	46	4	2.9	3	1.9	2	0.86	30	31
4	76	271	27	91	5	3.9	3	1.8	2	0.94	46	118
5	59	145	9	26	1	0.80	2	1.2	2	1.0	73	638
6	40	75	7	18	2	1.6	2	1.2	2	0.84	24	111
7	35	54	11	26	37	206	2	1.2	2	0.81	13	44
8	185	694	28	60	63	269	2	1.1	2	0.81	11	30
9	352	9400	8	16	60	139	3	1.7	2	0.81	9	21
10	155	5440	9	17	30	56	1	0.59	2	0.86	5	10
11	92	1170	11	19	7	12	1	0.54	5	3.0	2	3.6
12	57	354	13	21	5	7.9	5	2.7	15	20	68	111
13	40	183	16	24	2	2.9	15	7.9	25	51	184	707
14	30	112	8	11	2	2.5	15	7.9	25	51	29	263
15	32	100	7	9.6	3	3.5	20	10	20	33	16	83
16	56	150	7	9.2	4	4.6	13	6.5	15	16	4	16
17	32	75	5	6.3	5	5.7	7	3.5	10	7.4	2	6.5
18	16	34	5	6.0	10	11	7	3.4	4	2.4	1	3.2
19	11	21	9	11	20	20	6	2.9	4	2.5	1	3.7
20	76	180	25	28	6	5.9	6	2.9	4	2.7	9	27
21	63	311	9	9.7	2	1.9	5	2.4	3	1.7	14	47
22	15	55	5	5.2	4	3.3	5	2.4	3	1.7	162	1600
23	42	119	8	8.0	3	2.6	5	2.2	2	1.4	258	3190
24	25	67	6	5.7	3	2.5	1	0.46	5	5.3	114	711
25	33	127	5	4.6	3	2.4	2	1.0	50	127	43	200
26	66	371	8	7.3	3	2.6	2	0.97	25	55	20	77
27	80	367	5	4.5	3	2.6	2	0.94	15	26	7	23
28	65	233	4	3.6	3	2.5	2	0.89	22	34	17	76
29	53	163	4	3.8	2	1.6	2	0.86	---	---	5	23
30	34	93	4	3.7	3	2.0	2	0.84	---	---	3	11
31	59	297	---	---	4	2.6	2	0.84	---	---	3	9.4
TOTAL	---	26553	---	865.2	---	789.90	---	81.13	---	449.71	---	8273.4

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2	5.5	13	15	1	0.48	12	4.3	9	2.4	28	8.2
2	129	1040	7	7.5	1	0.48	16	5.4	8	2.1	23	6.3
3	43	403	3	3.2	2	0.91	13	4.2	7	1.8	28	11
4	48	263	4	4.1	1	0.44	11	3.5	7	1.7	28	7.7
5	257	2790	6	6.8	1	0.43	10	3.2	6	1.5	17	4.6
6	49	417	5	6.0	1	0.46	8	2.6	4	0.95	16	4.4
7	13	72	4	4.6	2	1.0	8	2.7	5	1.2	18	5.8
8	9	42	2	2.1	2	1.0	17	6.6	6	1.4	21	6.6
9	8	31	1	0.93	3	1.5	14	5.5	7	1.7	20	5.8
10	6	21	1	0.90	4	2.4	16	6.3	8	2.0	18	5.0
11	2	6.1	1	0.86	3	1.7	8	3.2	8	2.6	19	5.1
12	1	2.8	1	0.83	2	1.0	32	37	10	3.2	16	4.0
13	1	2.5	1	0.80	1	0.47	61	44	13	4.1	17	4.1
14	3	6.9	8	6.1	8	3.7	23	11	15	4.8	15	3.5
15	4	8.4	25	19	19	8.9	22	8.6	14	4.5	14	3.3
16	3	5.8	8	5.7	5	2.4	25	8.2	9	2.7	14	3.2
17	6	11	7	4.9	2	0.94	15	4.6	38	18	14	3.3
18	10	17	3	2.1	2	1.2	10	3.6	67	34	12	2.9
19	2	3.3	6	4.3	2	1.2	18	6.5	26	10	16	3.8
20	1	1.5	31	22	6	2.9	53	39	15	4.7	28	7.3
21	1	1.4	6	3.9	23	11	54	40	12	3.5	20	5.6
22	2	2.8	1	0.61	12	5.2	28	16	10	2.8	14	4.0
23	2	2.7	1	0.59	21	8.6	32	14	8	2.4	11	2.8
24	32	69	1	0.58	23	9.0	12	4.7	9	2.6	9	2.1
25	62	113	1	0.57	9	3.4	27	11	11	3.1	10	2.3
26	44	65	1	0.56	12	5.2	48	24	14	3.9	14	3.7
27	30	40	1	0.52	40	16	24	9.5	12	3.3	18	5.9
28	23	28	1	0.50	35	14	13	4.5	10	2.7	22	8.4
29	18	24	2	0.97	16	7.3	12	3.7	9	2.4	16	5.4
30	15	19	5	2.4	16	6.4	10	2.9	25	7.6	10	2.9
31	---	---	1	0.47	---	---	9	2.6	57	16	---	---
TOTAL	---	5514.7	---	129.39	---	119.61	---	342.9	---	155.65	---	149.0

TOTAL LOAD FOR YEAR: 43423.59 TONS.

01617800 MARSH RUN AT GRIMES, MD

LOCATION.--Lat 39°30'53", long 77°46'38", Washington County, Hydrologic Unit 02070004, on right bank 220 ft (67 m) upstream from bridge on Sprecher Road, 0.1 mi (0.2 km) downstream from unnamed tributary, 0.5 mi (0.8 km) southwest of Grimes, 1.5 mi (2.4 km) upstream from mouth, and 2.2 mi (3.5 km) southwest of Fairplay.

DRAINAGE AREA.--18.9 mi^2 (49.0 km^2).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 354.72 ft (108.119 m) above mean sea level.

REMARKS.--Records good except those for January and February, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 13.1 ft^3/s (0.371 m^3/s), 9.41 in/yr (239 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 345 ft^3/s (9.77 m^3/s) June 1, 1975, gage height, 3.78 ft (1.152 m); minimum, 0.10 ft^3/s (0.003 m^3/s) Sept. 30, 1977, result of regulation caused by construction work above station; minimum daily, 0.40 ft^3/s (0.011 m^3/s) Jan. 31, 1966, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft^3/s (1.7 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	0430	94	2.66	2.26	0.689	Oct. 25	2315	90	2.55	2.22	0.677
Oct. 2	2215	62	1.76	1.94	0.591	Apr. 5	0330	101	2.86	2.32	0.707
Oct. 9	1045	*278	7.87	3.49	1.064	Apr. 24	1545	71	2.01	2.04	0.622

Minimum discharge, 0.10 ft^3/s (0.003 m^3/s) Sept. 30, gage height, 0.57 ft (0.174 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	36	16	13	8.6	9.5	16	17	11	9.2	8.0	6.5
2	29	32	16	12	8.3	9.1	30	17	11	8.7	7.7	6.2
3	41	31	15	12	8.3	8.8	28	17	10	8.4	7.3	5.9
4	24	30	15	12	8.4	13	26	17	10	8.2	7.1	5.8
5	19	27	14	12	8.2	15	76	17	10	8.1	7.0	5.7
6	17	24	14	12	8.2	13	41	18	11	7.7	6.6	5.7
7	16	24	31	12	8.2	12	35	17	11	7.9	6.5	5.5
8	24	24	20	12	8.2	11	32	17	10	8.4	6.4	5.5
9	166	23	17	12	8.1	11	29	15	13	8.4	6.2	5.2
10	81	24	16	12	7.9	11	28	15	12	8.2	6.2	5.0
11	45	23	16	11	11	10	26	15	11	8.6	5.9	4.8
12	38	22	17	11	13	10	24	15	10	16	6.2	4.7
13	35	22	16	11	13	23	23	14	10	14	6.6	4.6
14	32	21	16	11	12	18	23	14	11	9.9	7.0	4.6
15	29	21	15	11	11	16	22	13	11	9.0	6.6	4.6
16	27	20	15	10	10	15	21	13	10	8.9	6.2	4.7
17	26	20	15	10	9.8	14	21	13	10	8.3	7.7	4.9
18	25	20	15	10	9.4	14	21	13	12	8.2	7.3	4.7
19	24	19	15	10	9.2	14	20	14	10	7.9	6.2	5.3
20	36	19	15	10	9.5	14	19	13	10	9.9	5.9	7.8
21	41	19	15	9.8	9.1	14	19	13	9.9	8.8	8.0	5.2
22	27	18	14	9.6	8.9	26	18	13	9.7	8.4	25	5.0
23	23	17	14	9.6	8.8	24	18	12	9.4	7.8	9.9	4.9
24	26	17	13	9.5	10	19	31	12	9.2	7.5	9.1	4.9
25	38	17	13	9.8	11	18	31	12	9.3	14	8.4	5.0
26	72	17	13	9.4	10	17	22	12	9.2	16	7.8	5.8
27	44	17	13	9.4	10	16	21	11	8.8	9.8	7.5	5.5
28	38	17	13	9.4	10	21	20	11	13	9.0	7.2	6.3
29	34	18	13	9.4	---	21	20	11	13	8.7	7.0	5.3
30	33	17	13	9.0	---	18	18	11	9.6	8.3	7.0	2.2
31	48	---	13	9.0	---	17	---	11	---	8.0	6.8	---
TOTAL	1224	656	476	329.9	268.1	472.4	779	433	315.1	290.2	238.3	157.8
MEAN	39.5	21.9	15.4	10.6	9.58	15.2	26.0	14.0	10.5	9.36	7.69	5.26
MAX	166	36	31	13	13	26	76	18	13	16	25	7.8
MIN	16	17	13	9.0	7.9	8.8	16	11	8.8	7.5	5.9	2.2
CFSM	2.09	1.16	.82	.56	.51	.80	1.38	.74	.56	.50	.41	.28
IN.	2.41	1.29	.94	.65	.53	.93	1.53	.85	.62	.57	.47	.31

CAL YR 1976 TOTAL 5955.4 MEAN 16.3 MAX 166 MIN 4.0 CFSM .86 IN 11.72
WTR YR 1977 TOTAL 5639.8 MEAN 15.5 MAX 166 MIN 2.2 CFSM .82 IN 11.10

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV

LOCATION.--Lat 39°26'04", long 77°48'07", Jefferson County, Hydrologic Unit 02070004, on right bank 0.1 mi (0.2 km) downstream from Rumsey Bridge at Shepherdstown, 3.3 mi (5.3 km) upstream from Antietam Creek, and at mile 184 (296 km).

DRAINAGE AREA.--5,936 mi² (15,374 km²).

PERIOD OF RECORD.--August 1928 to September 1953. Annual maximums, water years 1954-64. July 1964 to current year. Gage-height record and estimated discharges October 1953 to June 1964 available in files of Maryland district office.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 281.00 ft (85.649 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are fair. Some regulation at low flow by power plants above station, Stony River Reservoir (see station 01595200), and since December 1950 by Savage River Reservoir (see station 01597500). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--38 years (water years 1929-53, 1965-77), 5,982 ft³/s (169.4 m³/s), 13.69 in/yr (348 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335,000 ft³/s (9,490 m³/s) Mar. 19, 1936, gage height, 42.1 ft (12.83 m), from floodmarks, from rating curve extended above 200,000 ft³/s (5,660 m³/s) on basis of slope-area measurement of peak flow; minimum, 170 ft³/s (4.81 m³/s) Aug. 1, 1966; minimum daily, 185 ft³/s (5.24 m³/s) July 31, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in June 1889 and May 1924 reached stages of 39.2 ft (11.95 m) and 29.8 ft (9.08 m) respectively, from floodmarks, discharges, about 290,000 ft³/s (8,210 m³/s) and 168,000 ft³/s (4,760 m³/s) respectively, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft³/s (650 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 2	0700	28100	796	9.98	3.042	Mar. 14	2330	43300	1230	13.13	4.002
Oct. 4	0900	25800	731	9.48	2.890	Mar. 23	1830	30600	867	10.53	3.210
Oct. 10	1800	*124000	3510	25.31	7.714	Apr. 3	2230	26400	748	9.60	2.926
Oct. 27	0830	29200	827	10.22	3.115	Apr. 6	1230	62100	1760	16.57	5.051
Mar. 6	0530	23500	666	8.95	2.728						

Minimum discharge, 544 ft³/s (15.4 m³/s) Sept. 14, gage height, 1.51 ft (0.460 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8460	14300	3330	2760	1180	12600	10000	3370	1330	1250	950	1010
2	24900	15400	3380	2400	1160	11000	9330	3210	1300	1150	900	846
3	20800	13400	3200	2060	1130	8730	20800	3020	1250	1050	850	785
4	24600	11800	3000	1790	1220	7280	22300	2880	1230	1000	800	818
5	16500	10900	3100	2260	1340	13200	27500	2820	1200	900	750	850
6	10000	9820	2900	2390	1400	21900	57800	2900	1140	800	700	798
7	7080	8450	2700	2120	1350	16600	44700	3000	1200	750	650	761
8	5980	7190	8000	2040	1300	13000	27400	3200	1200	800	600	806
9	30000	6410	14000	1960	1250	10500	20000	3660	1260	800	600	792
10	113000	5900	12900	1880	1150	8860	15500	3640	1300	800	650	783
11	87100	5540	9950	1800	1100	7800	12800	3360	1320	1100	800	745
12	32200	5260	8540	1750	2140	6900	11200	3130	1330	1600	820	686
13	19500	5000	7760	1720	2770	7250	9660	2830	1650	1450	780	652
14	14500	4720	7310	1690	3710	29600	8430	2700	1550	1400	730	612
15	11400	4470	6380	1670	4310	37300	7540	2630	1450	1400	750	666
16	9360	4210	5700	1640	4640	24100	6810	2480	1450	1300	850	629
17	7810	4010	5480	1600	4160	17400	6140	2320	1400	1150	1150	630
18	6610	4180	5290	1580	3500	13300	5700	2240	160[illegible]	1050	1250	629
19	5650	3760	5210	1540	3180	12300	5200	2080	1400	1000	1150	617
20	5320	3610	4590	1500	3000	13500	4850	1960	1300	1750	1000	667
21	7390	3510	4190	1480	2830	12100	4580	2040	1400	2000	900	798
22	14200	3400	3800	1450	2820	11700	4280	2200	1250	2500	800	699
23	13500	3310	3470	1420	2700	27000	4090	2260	1100	1800	760	653
24	10900	3210	3160	1390	2720	25800	4070	2060	1100	1300	740	653
25	11100	3090	2800	1360	3250	18600	4440	1900	1050	900	720	646
26	17900	2970	2560	1330	15100	14600	4190	1770	1000	900	700	720
27	27600	2900	2830	1300	16500	12000	3830	1650	950	950	660	732
28	20600	2870	3050	1280	13600	10300	3570	1600	1050	1100	640	768
29	15200	2960	3010	1260	---	13000	3450	1550	1450	1100	700	874
30	12200	3170	2830	1230	---	14500	3460	1450	1350	1050	785	1120
31	11100	---	2680	1200	---	11900	---	1400	---	1000	933	---
TOTAL	622460	179720	157100	52850	104510	464620	373620	77310	38560	37100	25068	22445
MEAN	20080	5991	5068	1705	3733	14990	12450	2494	1285	1197	809	748
MAX	113000	15400	14000	2760	16500	37300	57800	3660	1650	2500	1250	1120
MIN	5320	2870	2560	1200	1100	6900	3450	1400	950	750	600	612
CFSM	3.38	1.01	.85	.29	.63	2.53	2.10	.42	.22	.20	.14	.13
IN.	3.90	1.13	.98	.33	.65	2.91	2.34	.48	.24	.23	.16	.14

CAL YR 1976 TOTAL 2305895 MEAN 6300 MAX 113000 MIN 753 CFSM 1.06 IN 14.45
WTR YR 1977 TOTAL 2155363 MEAN 5905 MAX 113000 MIN 600 CFSM 1.00 IN 13.51

01619000 ANTIETAM CREEK NEAR WAYNESBORO, PA

LOCATION.--Lat 39°42'59", long 77°36'28", Washington County, Md., Hydrologic Unit 02070004, on right bank 100 ft (30 m) upstream from highway bridge at Rocky Forge, 0.4 mi (0.6 km) downstream from Pennsylvania-Maryland State line, 0.7 mi (1.1 km) downstream from confluence of west and east branches, 1.9 mi (3.1 km) northeast of Leitersburg, Md., 2.5 mi (4.0 km) southwest of Waynesboro, Pa., and 36.6 mi (58.9 km) upstream from mouth.

DRAINAGE AREA.--93.5 mi^2 (242.2 km^2).

PERIOD OF RECORD.--May 1948 to September 1951, October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 536.59 ft (163.553 m) above mean sea level (Corps of Engineers bench mark). May 1948 to September 1951, nonrecording gage and crest-stage gage 100 ft (30 m) downstream at present datum.

REMARKS.--Records good except those for January and February, which are fair. Occasional regulation from mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1949-51, 1966-77), 119 ft^3/s (3.370 m^3/s), 17.28 in/yr (439 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft^3/s (154 m^3/s) June 22, 1972, gage height, 12.33 ft (3.758 m), from rating curve extended above 2,700 ft^3/s (76.5 m^3/s); minimum daily, 11 ft^3/s (0.31 m^3/s) Jan. 30, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft^3/s (24 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	0700	887	25.1	5.48	1.670
Oct. 9	1545	*3650	103	10.18	3.103
Apr. 2	1700	972	27.5	5.67	1.728
Apr. 5	0445	1090	30.9	5.92	1.804

Minimum discharge, 31 ft^3/s (0.88 m^3/s) Sept. 10, 19, gage height, 3.11 ft (0.948 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	535	239	86	70	55	81	145	121	72	50	44	38
2	185	215	84	70	54	78	483	120	68	48	43	39
3	231	206	82	68	53	76	410	119	66	46	42	39
4	164	195	80	69	54	160	345	118	65	45	42	36
5	132	180	78	68	54	179	786	150	65	45	41	36
6	117	168	76	66	54	138	464	141	77	44	41	35
7	106	159	235	69	52	127	373	122	73	46	41	37
8	177	151	130	69	52	116	328	115	67	47	41	36
9	1870	144	103	66	52	109	273	110	80	47	43	35
10	810	140	98	69	56	103	250	107	80	46	47	35
11	437	133	98	65	71	98	230	105	69	50	42	34
12	321	128	98	62	80	96	211	102	65	48	42	33
13	264	123	95	62	94	303	197	100	65	50	55	33
14	223	120	89	61	85	212	186	97	67	46	48	33
15	188	116	89	61	76	177	174	94	74	43	46	33
16	170	112	89	61	69	160	166	93	65	42	44	34
17	158	110	89	60	64	142	158	91	66	50	81	37
18	147	107	86	60	64	162	151	91	75	60	50	34
19	137	104	84	58	66	143	146	90	63	46	40	33
20	246	102	86	58	67	137	140	87	60	93	39	39
21	294	99	88	57	64	135	135	83	60	57	42	34
22	185	97	79	57	62	377	131	81	57	50	47	34
23	168	95	80	54	66	324	140	80	56	47	40	33
24	196	94	76	59	86	251	220	79	55	46	42	33
25	236	92	75	59	114	215	182	78	60	61	43	34
26	363	91	81	58	90	194	145	77	60	60	41	41
27	250	90	78	57	87	178	135	74	55	48	39	50
28	224	89	77	56	86	233	137	72	87	46	38	51
29	204	95	76	56	---	195	144	72	65	45	38	37
30	193	91	69	55	---	162	126	71	52	45	47	34
31	351	---	72	55	---	153	---	72	---	44	41	---
TOTAL	9282	3885	2806	1915	1927	5214	7111	3012	1989	1541	1370	1090
MEAN	299	130	90.5	61.8	68.8	168	237	97.2	66.3	49.7	44.2	36.3
MAX	1870	239	235	70	114	377	786	150	87	93	81	51
MIN	106	89	69	54	52	76	126	71	52	42	38	33
CFSM	3.20	1.39	.97	.66	.74	1.80	2.54	1.04	.71	.53	.47	.39
IN.	3.69	1.55	1.12	.76	.77	2.07	2.83	1.20	.79	.61	.55	.43

CAL YR 1976 TOTAL 45296 MEAN 124 MAX 1870 MIN 35 CFSM 1.33 IN 18.02
WTR YR 1977 TOTAL 41142 MEAN 113 MAX 1870 MIN 33 CFSM 1.21 IN 16.37

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD

LOCATION.--Lat 39°27'01", long 77°43'52", Washington County, Hydrologic Unit 02070004, on left bank 400 ft (120 m) downstream from Burnside Bridge, 1.0 mi (1.6 km) southeast of Sharpsburg, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--281 mi^2 (728 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1897 to September 1905, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 192: 1897-1905. WSP 726: Drainage area. WSP 1432: 1929-31(M), 1933, 1935(M), 1937(M), 1949(M), 1952(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 29, 1934. Datum of gage is 311.00 ft (94.793 m) above mean sea level, adjustment of 1912. June 24, 1897, to Aug. 25, 1905, nonrecording gage a few hundred feet downstream from Middle Bridge, 1.2 mi (1.9 km) upstream at datum 12 ft (3.7 m) higher. Aug. 21, 1928, to July 13, 1933, nonrecording gage at Burnside Bridge, 0.1 mi (0.2 km) upstream at present datum.

REMARKS.--Water-discharge records good except those for January and February, which are fair. Some diurnal fluctuation caused by powerplant above station. Since 1928 records include pumpage from the Potomac River for municipal supply of Hagerstown. This water later enters Antietam Creek above station as sewage.

AVERAGE DISCHARGE.--54 years (water years 1898-1903, 1905, 1931-77), 273 ft^3/s (7.731 m^3/s), 13.19 in/yr (335 mm/yr), adjusted for inflow since January 1930.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft^3/s (357 m^3/s) July 20, 1956, gage height, 16.73 ft (5.099 m); minimum, 9.4 ft^3/s (0.266 m^3/s) Nov. 22, 1957, result of regulation caused by construction work above station; minimum daily, 37 ft^3/s (1.05 m^3/s) Jan. 30, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1315	*6920	196	11.88	3.621	June 28	1800	1720	48.7	5.77	1.759
Apr. 5	1600	2280	64.6	6.62	2.018						

Minimum discharge, 99 ft^3/s (2.80 m^3/s) Sept. 11, 12, 13, 14, gage height, 2.35 ft (0.716 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	798	300	210	165	222	452	378	208	178	140	121
2	778	684	295	215	160	212	676	365	208	169	138	115
3	757	657	287	225	165	205	1110	363	202	161	133	114
4	614	635	278	227	173	259	808	353	199	156	130	115
5	475	601	275	224	171	482	1990	373	196	151	128	109
6	403	565	270	219	160	374	1390	449	202	151	122	108
7	361	538	537	222	155	338	1040	379	231	164	120	109
8	523	516	544	213	150	317	920	351	208	187	120	109
9	3770	492	368	210	150	298	804	331	224	161	122	107
10	3730	484	339	220	165	284	737	335	252	164	122	107
11	1360	466	330	213	209	273	690	318	217	164	135	103
12	989	446	326	210	250	263	653	310	202	208	138	100
13	833	430	320	210	260	571	615	302	196	185	148	101
14	735	415	305	205	258	738	584	295	196	158	158	103
15	660	406	301	205	233	539	552	284	199	151	148	103
16	599	395	300	200	212	485	528	275	202	146	135	105
17	555	385	298	195	196	437	504	271	219	143	168	109
18	520	381	289	190	189	430	486	267	289	166	219	109
19	489	371	280	185	188	444	473	276	196	161	151	104
20	590	361	282	180	194	400	455	261	199	210	135	125
21	922	351	290	180	191	402	438	253	187	214	128	112
22	650	344	266	175	182	597	425	242	175	187	226	105
23	573	337	267	175	181	950	414	237	172	156	141	104
24	577	332	259	180	201	683	504	235	166	151	139	104
25	698	325	251	195	277	607	625	233	164	195	136	108
26	1220	320	261	193	253	557	466	231	172	255	127	117
27	893	318	261	186	234	519	432	227	169	169	122	117
28	766	313	255	180	229	555	417	224	487	153	119	170
29	709	337	251	175	---	617	436	217	305	148	116	133
30	666	326	239	170	---	508	401	211	199	146	127	112
31	873	---	220	165	---	479	---	208	---	143	128	---
TOTAL	28388	13329	9344	6152	5551	14045	20025	9054	6441	5251	4319	3358
MEAN	916	444	301	198	198	453	668	292	215	169	139	112
MAX	3770	798	544	227	277	950	1990	449	487	255	226	170
MIN	361	313	220	165	150	205	401	208	164	143	116	100
(≠)	-7.7	-6.3	-6.9	-10.0	-13.6	-7.4	-6.5	-7.8	-13.3	-15.4	-15.3	-15.4
MEAN≠	908	438	294	188	184	446	662	284	202	154	124	96.6
CFSM≠	3.23	1.56	1.05	.67	.65	1.59	2.36	1.01	.72	.55	.44	.34
IN≠	3.72	1.74	1.21	.77	.68	1.83	2.63	1.16	.80	.63	.51	.38

CAL YR 1976 TOTAL 138511 MEAN 378 MAX 3770 MIN 108 MEAN≠ 370 CFSM≠ 1.32 IN≠ 17.92
WTR YR 1977 TOTAL 125257 MEAN 343 MAX 3770 MIN 100 MEAN≠ 333 CFSM≠ 1.19 IN≠ 16.09

≠ Pumpage in cubic feet per second, from Potomac River for municipal supply of Hagerstown.
≠ Adjusted for pumpage.

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT 08...	1520	588	400	7.3	18.0	15.0	--	--	--
12...	1150	1030	--	--	15.0	10.5	--	--	--
NOV 18...	1045	361	--	--	9.0	6.0	--	--	--
DEC 06...	1020	267	500	8.2	-5.0	3.0	--	--	--
JAN 04...	1225	220	500	8.3	4.0	2.5	--	--	--
FEB 21...	1130	188	480	8.4	2.0	3.5	0	220	39
APR 11...	1305	666	420	8.0	24.0	11.5	5	200	48
MAY 26...	1540	231	480	8.3	27.0	20.0	--	--	--
JUL 12...	1055	166	510	8.3	29.5	22.5	10	240	38
AUG 22...	1240	190	370	7.5	26.0	19.5	--	--	--

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT 08...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--	--
DEC 06...	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--
FEB 21...	66	14	10	3.3	224	26	17	.2	4.4
APR 11...	62	12	5.6	2.7	190	23	11	.1	7.6
MAY 26...	--	--	--	--	--	--	--	--	--
JUL 12...	71	14	11	3.7	240	30	16	.2	8.0
AUG 22...	--	--	--	--	--	--	--	--	--

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT 08...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--
DEC 06...	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--
FEB 21...	272	251	3.5	.14	140	10	20	10
APR 11...	235	218	3.0	.13	1000	20	40	10
MAY 26...	--	--	--	--	--	--	--	--
JUL 12...	291	272	3.7	.23	1200	10	50	20
AUG 22...	--	--	--	--	--	--	--	--

01636500 SHENANDOAH RIVER AT MILLVILLE, WV

LOCATION.--Lat 39°16'55", long 77°47'22", Jefferson County, Hydrologic Unit 02070007, on left bank 0.4 mi (0.6 km) downstream from Cattail Run, 1.0 mi (1.6 km) upstream from Millville, 5.0 mi (8.0 km) upstream from Harpers Ferry, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--3,040 mi^2 (7,874 km^2).

PERIOD OF RECORD.--April 1895 to March 1909, August 1928 to current year.

REVISED RECORDS.--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-02, 1905, 1907-08, 1932(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft (89.306 m) above mean sea level, adjustment of 1912. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi (1.3 km) downstream at datum 0.32 ft (0.098 m) higher.

REMARKS.--Records good except those for ice-affected days in December, January, and February, which are poor. Regulation by hydroelectric plants, particularly that of Potomac Light and Power Co., 0.5 mi (0.8 km) upstream from station. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--62 years (water years 1896-1908, 1929-77), 2,648 ft^3/s (74.99 m^3/s), 11.83 in/yr (300 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 230,000 ft^3/s (6,510 m^3/s) Oct. 16, 1942, gage height, 32.4 ft (9.88 m), from floodmarks; minimum, about 59 ft^3/s (1.67 m^3/s) Oct. 4, 1930, gage height, 0.39 ft (0.119 m); minimum daily, 194 ft^3/s (5.49 m^3/s) July 24, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft (8.035 m), discharge, 151,000 ft^3/s (4,280 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft^3/s (420 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 11	0115	*49400	1400	15.30	4.663	Apr. 6	2015	18800	532	9.45	2.880

Minimum discharge, 224 ft^3/s (6.34 m^3/s) Sept. 13, 1 , gage height, 0.88 ft (0.268 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	4410	1630	1000	900	1510	2320	1410	731	591	422	487
2	1760	4870	2100	810	870	1530	2260	1400	779	487	393	481
3	4450	4580	2050	910	840	1450	2140	1410	787	439	370	544
4	6400	4130	1850	1100	870	1460	2150	1310	707	457	370	469
5	5270	3720	1780	1000	900	1470	7200	1260	670	463	365	524
6	3340	3360	1690	1000	700	1510	16600	1290	723	393	387	584
7	2420	3040	2040	1100	770	1630	14600	1340	677	463	399	544
8	2060	2800	4770	1000	760	2240	9310	1410	647	439	387	451
9	10600	2560	9970	1100	800	2220	6830	1330	677	404	387	499
10	36300	2420	7040	1200	860	2010	5580	1230	715	410	399	544
11	31200	2320	5360	1100	1000	1870	4720	1130	723	422	410	524
12	11300	2180	4550	1000	1100	1750	4070	1040	685	451	404	457
13	7240	2140	4110	1000	1500	1960	3600	1040	647	518	544	416
14	5500	2060	3780	1100	1600	5350	3220	1030	640	451	399	445
15	4430	2010	3250	1100	1350	10200	2920	1020	640	451	422	410
16	3600	1960	3080	1000	1400	7460	2690	987	640	457	422	410
17	3090	1860	2900	900	1270	5480	2530	951	633	445	451	428
18	2740	1850	2800	1000	1170	4410	2350	909	763	416	422	410
19	2500	1680	2650	1000	1080	3690	2240	934	755	416	463	387
20	2560	1690	2490	1100	1120	3170	2100	909	685	524	626	422
21	3040	1670	2360	1100	1070	2930	2010	867	670	416	499	662
22	4300	1620	2220	1000	943	2860	1950	827	647	428	410	647
23	4980	1570	2090	1000	1010	4110	1840	843	591	381	428	511
24	4340	1540	2040	1000	1050	4340	1790	795	570	365	416	481
25	3980	1510	1820	1200	1080	4470	1620	811	570	354	416	457
26	4410	1470	1850	1100	1110	4000	1660	811	557	404	393	505
27	6040	1440	1800	1200	1210	3480	1600	723	550	469	422	475
28	6770	1440	1780	1100	1520	3160	1560	755	557	463	428	463
29	5360	1480	1740	950	---	2980	1510	763	577	469	463	655
30	4510	1540	1600	1000	---	2740	1480	803	598	422	511	591
31	4170	---	1500	950	---	2500	---	763	---	410	481	---
TOTAL	199770	70920	90690	32120	29853	99940	116450	32101	19811	13678	13309	14883
MEAN	6444	2364	2925	1036	1066	3224	3882	1036	660	441	429	496
MAX	36300	4870	9970	1200	1600	10200	16600	1410	787	591	626	662
MIN	1110	1440	1500	810	700	1450	1480	723	550	354	365	387
CFSM	2.12	.78	.96	.34	.35	1.06	1.28	.34	.22	.15	.14	.16
IN.	2.44	.87	1.11	.39	.37	1.22	1.42	.39	.24	.17	.16	.18

CAL YR 1976 TOTAL 952104 MEAN 2601 MAX 36300 MIN 435 CFSM .86 IN 11.65
WTR YR 1977 TOTAL 733525 MEAN 2010 MAX 36300 MIN 354 CFSM .66 IN 8.98

01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD

LOCATION.--Lat 39°25'35", long 77°33'25", Frederick County, Hydrologic Unit 02070008, on right bank 300 ft (91 m) downstream from bridge on State Highway 17, 1.3 mi (2.1 km) south of Middletown, 2.2 mi (3.5 km) downstream from Little Catoctin Creek, and 14.8 mi (23.8 km) upstream from mouth.

DRAINAGE AREA.--66.9 mi² (173.3 km²).

PERIOD OF RECORD.--August 1947 to current year.

REVISED RECORDS.--WSP 1432: 1947-48.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 385 ft (117.3 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 74.7 ft³/s (2.116 m³/s), 15.16 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) Oct. 9, 1976, gage height, 14.13 ft (4.307 m), from rating curve extended above 2,600 ft³/s (73.6 m³/s) on basis of slope-area measurement of peak flow; no flow Aug. 27 to Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1015	*12000	340	14.13	4.307
Dec. 7	0730	1220	34.6	4.12	1.256
Apr. 2	1230	1570	44.5	4.66	1.420
Apr. 5	0130	2530	71.7	5.97	1.820
June 28	1900	3060	86.7	6.61	2.015

Minimum discharge, 1.9 ft³/s (0.054 m³/s) Sept. 14, 15, gage height, 1.45 ft (0.442 m).

REVISIONS.--Some peak discharges and the annual maximum (*) for water years 1960, 1965, 1970, 1972, and 1975 have been revised as shown in the following table. They supersede figures published in WSP 1722, 1903, and 2103, and the reports for 1972 and 1975.

Water year	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
1960	June 18, 1960	0230	*2380	67.4	5.78	1.762
1965	Mar. 5, 1965	0800	*2860	79.9	6.37	1.942
1970	July 9, 1970	2130	*4230	119	7.87	2.399
1972	Oct. 25, 1971	1600	3860	109	7.49	2.283
	June 22, 1972	0230	*9390	266	12.28	3.743
1975	Dec. 2, 1974	0200	3080	86.4	6.63	2.021
	Mar. 19, 1975	1500	2680	74.8	6.15	1.875
	June 1, 1975	0130	2950	82.7	6.48	1.975
	Sept. 25, 1975	1330	4290	121	7.93	2.417
	Sept. 26, 1975	1000	*4900	138	8.53	2.600

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	480	204	40	38	24	78	122	54	17	37	10	5.1
2	252	175	40	36	26	68	619	52	16	30	10	4.6
3	432	162	33	34	28	61	376	52	15	24	10	4.0
4	194	151	35	32	30	195	412	48	13	22	10	4.2
5	133	135	34	30	32	219	1350	61	12	22	9.8	3.6
6	105	122	34	29	24	159	536	61	18	19	10	3.6
7	88	111	338	30	24	140	361	58	22	18	9.6	3.2
8	377	103	135	30	22	122	278	46	16	17	9.5	3.4
9	4880	93	103	30	22	108	222	38	32	17	9.5	3.6
10	878	91	93	32	30	98	192	37	32	16	10	3.5
11	440	84	84	30	80	91	170	35	22	15	30	3.1
12	299	80	82	28	153	84	151	34	17	15	14	2.5
13	232	75	78	30	195	563	138	32	15	18	24	2.4
14	190	70	75	30	122	338	125	32	15	14	13	2.1
15	164	68	75	32	84	241	114	29	17	12	12	2.2
16	140	63	63	30	52	198	105	28	16	11	11	3.3
17	116	58	61	28	44	164	95	27	17	11	62	3.8
18	105	58	56	28	42	164	91	26	58	11	24	3.3
19	93	56	50	28	44	143	84	27	22	12	12	2.9
20	175	52	56	30	42	138	80	26	23	20	7.8	3.8
21	226	50	65	28	35	135	73	24	20	21	6.4	5.7
22	133	48	52	28	34	436	70	21	14	14	19	4.7
23	114	44	54	28	44	327	65	21	13	12	13	3.6
24	170	42	38	30	114	241	108	21	12	11	11	3.2
25	274	42	46	32	148	201	128	22	12	28	11	3.5
26	513	42	46	28	95	175	78	21	13	38	8.4	6.7
27	261	42	44	27	89	153	68	19	12	16	6.8	8.2
28	207	42	42	26	86	195	65	18	629	12	6.0	11
29	178	65	40	26	---	172	75	19	143	11	5.5	8.4
30	162	48	38	24	---	146	61	17	54	11	8.0	5.5
31	365	---	38	24	---	138	---	18	---	11	5.9	---
TOTAL	12376	2476	2068	916	1765	5691	6412	1024	1337	546	409.2	128.7
MEAN	399	82.5	66.7	29.5	63.0	184	214	33.0	44.6	17.6	13.2	4.29
MAX	4880	204	338	38	195	563	1350	61	629	38	62	11
MIN	88	42	33	24	22	61	61	17	12	11	5.5	2.1
CFSM	5.96	1.23	1.00	.44	.94	2.75	3.20	.49	.67	.26	.20	.06
IN.	6.88	1.38	1.15	.51	.98	3.16	3.57	.57	.74	.30	.23	.07

CAL YR 1976 TOTAL 36465.6 MEAN 99.6 MAX 4880 MIN 5.6 CFSM 1.49 IN 20.28
WTR YR 1977 TOTAL 35148.9 MEAN 96.3 MAX 4880 MIN 2.1 CFSM 1.44 IN 19.54

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mi (0.5 km) downstream from Catoctin Creek (Virginia), 6 mi (9.7 km) upstream from Monocacy River, and at mile 159.5 (256.6 km).

DRAINAGE AREA.--9,651 mi^2 (24,996 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1895 to current year.

REVISED RECORDS.--WSP 192: 1895-1905. WSP 1432: 1899, 1901-2, 1904-5, 1912, 1914(M), 1915, 1917(M), 1918, 1919(M), 1920, 1921-23(M), 1924, 1925-28(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 200.54 ft (61.125 m) above mean sea level, adjustment of 1912. Prior to October 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft (0.317 m) higher.

REMARKS.--Water-discharge records good. Low flow affected slightly since 1913 by Stony River Reservoir (see station 01595200) and since December 1950 by Savage River Reservoir (see station 01597500). Low flow affected extensively at times by run-of-the-river hydroelectric plants. Gage-height telemeter at station.

AVERAGE DISCHARGE.--82 years, 9,273 ft^3/s (262.6 m^3/s), 13.05 in/yr (331 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480,000 ft^3/s (13,600 m^3/s) Mar. 19, 1936, gage height, 41.03 ft (12.506 m) from rating curve extended above 300,000 ft^3/s (8,500 m^3/s) on the basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow; minimum, 530 ft^3/s (15.0 m^3/s) Sept. 11, 12, 1966, gage height, 0.27 ft (0.082 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, reached a stage of 40.2 ft (12.25 m), from floodmarks, discharge, about 460,000 ft^3/s (13,000 m^3/s) from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35,000 ft^3/s (990 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 11	0200	*193000	5470	27.25	8.306	Apr. 6	1830	83100	2350	15.61	4.758
Mar. 15	0930	52300	1480	11.46	3.493						

Minimum discharge, 1,080 ft^3/s (30.6 m^3/s) Aug. 10, Sept. 14, 16, gage height, 0.68 ft (0.207 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4730	18900	5170	3000	3000	14300	13200	5390	2360	2070	1510	1490
2	25200	20900	5680	2600	2800	13000	13300	5190	2210	1910	1450	1570
3	25500	19400	5620	3000	2600	10800	20500	5080	2300	1670	1370	1520
4	29400	17000	5140	3400	2600	9390	27200	4830	2160	1570	1280	1410
5	24900	15600	4850	3200	2800	11700	36100	4760	2070	1520	1220	1350
6	15500	14100	4670	3200	2200	23300	73700	4810	2130	1450	1210	1460
7	10700	12500	6140	3400	2400	19600	68700	4900	2060	1400	1240	1410
8	9190	10900	11400	3200	2400	16000	41700	5000	2030	1250	1190	1320
9	46900	9800	23100	3400	2400	13500	30100	5220	2200	1400	1140	1310
10	154000	9050	21500	3600	2600	11500	23500	5270	2350	1330	1120	1340
11	158000	8460	16400	3400	3200	10200	19200	4970	2350	1350	1210	1370
12	58000	7980	13700	3000	3600	9170	16500	4560	2220	1430	1160	1260
13	32300	7740	12300	3200	5000	9890	14400	4300	2180	2070	1300	1180
14	23200	7400	11400	3600	5800	27100	12800	4080	2370	2350	1480	1110
15	17700	7080	10500	3400	6800	49000	11400	3880	2390	2080	1400	1110
16	14300	6760	9210	3000	6600	35100	10400	3730	2310	1960	1380	1100
17	12100	6420	8690	2800	6400	25400	9600	3510	2210	1910	1470	1130
18	10400	6420	8290	3200	5800	19300	8810	3540	2770	1850	1510	1110
19	8950	6120	8200	3200	5400	16300	8200	3410	2560	1680	1900	1110
20	8610	5780	7530	3400	4800	17000	7690	3400	2370	1920	2020	1100
21	10500	5650	6970	3400	4500	15700	7290	3250	2310	2300	1850	1190
22	17300	5470	6730	3200	4500	15700	6920	3320	2100	3820	1670	1510
23	19800	5280	5950	3200	4500	27500	6570	3340	2020	3110	1760	1320
24	16800	5160	5680	3200	4440	32200	6360	3170	1910	2510	1610	1200
25	15800	5020	5060	3600	4740	25100	6860	3020	1870	2040	1390	1170
26	21500	4870	4740	3600	12900	20100	6580	3030	1730	2000	1280	1240
27	32500	4750	4850	3800	18700	16700	6120	2660	1620	1820	1250	1260
28	30100	4700	5040	3600	15600	14500	5780	2650	1820	1760	1250	1280
29	22800	4860	5090	3000	---	15400	5640	2610	2570	1660	1210	1360
30	18100	5010	4810	3200	---	18000	5510	2520	2000	1590	1290	1550
31	16800	---	4400	3000	---	15600	---	2450	---	1590	1330	---
TOTAL	911580	269080	258810	101000	149080	578050	530630	121850	65550	58370	43450	38840
MEAN	29410	8969	8349	3258	5324	18650	17690	3931	2185	1883	1402	1295
MAX	158000	20900	23100	3800	18700	49000	73700	5390	2770	3820	2020	1570
MIN	4730	4700	4400	2600	2200	9170	5510	2450	1620	1250	1120	1100
CFSM	3.05	.93	.87	.34	.55	1.93	1.83	.41	.23	.20	.15	.13
IN.	3.51	1.04	1.00	.39	.57	2.23	2.05	.47	.25	.22	.17	.15

CAL YR 1976 TOTAL 3507260 MEAN 9583 MAX 158000 MIN 1260 CFSM .99 IN 13.52
WTR YR 1977 TOTAL 3126290 MEAN 8565 MAX 158000 MIN 1100 CFSM .89 IN 12.05

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1960 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1960 to current year.

REMARKS.--Water temperatures are measured daily in field at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 33.5°C Aug. 24, 1964, July 19, 1977; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,350 mg/L Apr. 3, 1970; minimum daily mean, 1 mg/L on many days most years.
SEDIMENT LOADS: Maximum daily, 689,000 tons (625,000 tonnes) June 23, 1972; minimum daily, 2.0 tons (1.8 tonnes) on many days during 1964, 1966-69.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum daily, 33.5°C July 19; minimum daily, river was ice covered on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,140 mg/L Oct. 9; minimum daily mean, 1 mg/L Nov. 12, 13, Dec. 22-24.
SEDIMENT LOADS: Maximum daily, 253,000 tons (230,000 tonnes) Oct. 10; minimum daily, 15 tons (14 tonnes) Dec. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA,MG) (MG/L)
OCT									
08...	1300	9303	250	8.0	19.5	17.0	3	10	93
NOV									
19...	1200	6200	370	8.6	.5	4.5	3	0	160
MAR									
21...	1300	15590	215	7.8	12.5	9.5	1	0	78
MAY									
17...	1500	3740	270	8.4	--	--	--	10	130
JUN									
16...	1100	2350	418	8.4	--	22.0	--	10	180
JUL									
14...	1430	2270	385	9.2	--	29.0	--	10	170
AUG									
04...	1330	1310	--	--	26.0	28.5	--	--	--
22...	1045	1662	390	8.4	24.0	27.0	0	55	150

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT									
08...	30	27	6.2	6.6	3.1	77	30	8.2	.1
NOV									
19...	49	48	10	12	1.9	137	48	16	.0
MAR									
21...	33	23	4.9	5.8	1.7	54	30	7.0	.1
MAY									
17...	36	34	10	16	2.4	110	53	15	.1
JUN									
16...	59	53	12	21	2.8	150	63	21	.1
JUL									
14...	77	47	12	26	2.9	110	77	28	.1
AUG									
04...	--	--	--	--	--	--	--	--	--
22...	64	42	12	34	3.1	110	90	31	.1

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
08...	8.7	150	128	1.3	.20	2600	70	120	10
NOV									
19...	1.1	201	205	1.2	.02	170	20	20	10
MAR									
21...	6.1	115	105	.65	.02	750	30	40	10
MAY									
17...	.2	199	185	.39	.06	530	20	60	0
JUN									
16...	4.4	272	251	.90	.12	560	50	70	20
JUL									
14...	.3	278	248	.01	.12	1000	40	110	10
AUG									
04...	--	--	--	--	--	--	--	--	--
22...	.3	293	267	.01	.12	1000	10	120	10

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
OCT							
03...	1250	24500	16.0	126	8340	33	47
11...	0545	188000	14.0	413	210000	--	47

DATE	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM
OCT							
03...	68	83	91	96	97	99	100
11...	69	80	84	90	93	96	100

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	9.5	3.5	---	---	7.0	15.5	---	26.5	27.5	28.0	31.0
2	16.0	9.5	4.0	---	---	7.0	13.5	19.5	22.0	27.0	29.0	31.0
3	16.0	9.0	2.5	1.0	---	8.0	---	21.0	23.0	---	28.5	29.0
4	17.0	9.0	2.5	2.0	---	7.5	11.0	18.0	24.0	---	30.5	---
5	18.0	9.0	3.0	1.0	---	9.0	11.5	21.5	---	31.0	30.5	27.0
6	17.5	9.5	3.0	---	---	8.0	9.5	21.5	22.0	33.0	30.5	29.0
7	18.0	9.5	3.0	1.0	---	7.5	10.5	20.5	20.0	28.0	---	27.0
8	18.0	7.0	2.5	---	---	9.5	10.0	---	21.0	32.0	31.5	26.5
9	17.5	6.5	3.0	---	---	10.5	10.5	17.0	18.5	---	31.0	23.0
10	15.5	7.0	3.0	---	---	11.0	---	17.0	---	---	32.0	26.0
11	14.0	6.5	3.5	---	---	13.0	14.0	18.5	23.0	27.0	32.5	---
12	14.5	6.5	4.0	---	---	12.5	16.0	---	---	27.5	29.5	23.0
13	15.5	6.5	3.0	---	---	14.0	17.5	21.5	20.5	30.5	---	24.0
14	14.5	6.5	3.0	---	---	12.0	17.5	23.0	22.5	30.5	---	22.0
15	15.5	6.5	4.5	---	---	13.0	18.0	---	24.0	31.0	28.5	20.0
16	14.5	6.5	4.0	---	---	12.0	---	23.0	27.0	---	29.5	21.0
17	13.5	7.0	4.5	---	---	---	---	25.5	27.5	---	28.5	24.0
18	13.5	7.5	4.0	---	---	10.5	20.0	25.5	---	32.5	24.5	---
19	13.0	9.5	---	---	---	---	21.0	26.0	---	33.5	---	28.0
20	12.5	7.0	5.0	---	---	---	19.5	26.0	25.5	32.0	26.5	26.0
21	11.5	7.0	---	---	---	11.0	21.0	---	27.5	32.5	---	28.0
22	11.5	5.5	---	---	---	8.5	22.0	---	25.0	30.0	27.0	27.0
23	---	5.5	3.0	---	7.0	9.5	22.5	27.0	27.0	---	---	28.0
24	10.0	4.5	1.0	---	7.0	7.0	---	26.0	26.5	---	25.0	23.0
25	11.0	7.0	1.0	---	8.0	9.0	19.5	24.0	---	27.5	24.0	---
26	11.0	7.0	2.0	---	7.5	9.5	---	27.0	---	22.5	25.0	24.0
27	10.5	7.0	1.0	---	6.5	---	19.5	28.0	30.0	27.5	27.0	21.0
28	10.0	8.0	2.0	---	6.0	10.0	18.5	---	27.0	---	---	21.0
29	10.5	6.0	2.0	---	---	13.5	18.5	---	28.5	27.0	30.0	20.0
30	9.5	3.5	1.0	---	---	14.5	---	---	29.5	---	29.0	22.0
31	10.0	---	1.0	---	---	13.5	---	22.0	---	---	30.0	---

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	49	913	15	765	9	126	7	57	10	81	51	1970
2	275	18900	18	1020	10	153	6	42	10	76	30	1050
3	197	13600	14	733	8	121	4	32	10	70	22	642
4	155	12300	8	367	5	69	4	37	10	70	20	507
5	108	7260	11	463	3	39	4	35	10	76	31	1020
6	75	3140	8	305	3	38	6	52	10	59	111	7610
7	48	1390	5	169	3	50	9	83	10	65	235	12400
8	40	993	7	206	28	512	10	86	10	65	102	4410
9	1140	175000	7	185	47	1510	10	92	10	65	54	1970
10	630	253000	6	147	43	2200	10	97	10	70	43	1340
11	535	242000	3	69	28	1240	10	92	10	86	39	1070
12	210	36100	1	22	18	666	10	81	10	97	34	842
13	108	9720	1	21	12	399	10	86	10	135	52	1390
14	56	3670	2	40	11	339	10	97	10	157	142	11500
15	49	2340	2	38	6	170	10	92	10	184	429	56900
16	36	1390	3	55	4	99	10	81	10	178	260	24600
17	28	915	3	52	5	117	10	76	10	173	135	9260
18	22	618	2	35	3	67	10	86	10	157	64	3340
19	21	507	3	50	2	44	10	86	10	146	49	2160
20	25	581	4	62	2	41	10	92	10	130	41	1880
21	22	624	3	46	2	38	10	92	10	121	36	1530
22	37	1730	5	74	1	18	10	86	10	121	47	1990
23	36	1920	4	57	1	16	10	86	21	255	115	8940
24	26	1180	4	56	1	15	10	86	14	168	176	15300
25	74	3200	5	68	6	82	10	97	19	243	101	6840
26	59	3290	11	145	3	38	10	97	65	2580	66	3580
27	72	6330	5	64	5	65	10	103	83	4190	56	2530
28	58	4710	4	51	5	68	10	97	74	3120	54	2110
29	32	1970	4	52	3	41	10	81	---	---	45	1870
30	21	1030	10	135	3	39	10	86	---	---	51	2480
31	18	816	---	---	7	83	10	81	---	---	46	1940
TOTAL	---	811137	---	5552	---	8503	---	2474	---	12938	---	194371
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	37	1320	74	1080	73	465	70	391	60	245	60	241
2	135	5120	56	785	46	274	62	320	47	184	62	263
3	209	11000	65	892	45	279	57	257	44	163	55	226
4	144	10500	59	769	62	362	56	237	45	156	54	206
5	200	20000	63	810	59	330	53	218	48	158	56	204
6	426	86900	68	883	52	299	40	157	43	140	67	264
7	442	83700	80	1060	56	311	42	159	38	127	77	293
8	208	24100	80	1080	46	252	54	182	35	112	96	342
9	101	8210	75	1060	39	232	64	242	55	169	78	276
10	69	4380	66	939	39	247	73	262	93	281	56	203
11	50	2590	60	805	40	254	80	292	76	248	54	200
12	48	2140	65	800	33	198	60	232	56	175	56	191
13	51	1980	73	848	24	141	60	335	60	211	60	191
14	42	1450	70	771	23	147	61	387	72	288	70	210
15	44	1350	65	681	75	484	62	348	82	310	80	240
16	49	1380	60	604	87	543	62	328	79	294	86	255
17	54	1400	56	531	92	549	61	315	73	290	68	207
18	57	1360	48	459	91	681	59	295	72	294	71	213
19	53	1170	58	534	86	594	51	231	72	369	83	249
20	58	1200	59	542	82	525	56	290	71	387	80	238
21	56	1100	61	535	81	505	78	435	70	350	77	247
22	64	1200	64	574	95	539	142	1460	69	311	87	355
23	45	798	67	604	92	502	120	1010	68	323	86	307
24	48	824	61	522	100	516	99	671	65	283	85	275
25	64	1190	67	546	96	485	81	446	51	191	84	265
26	68	1210	72	589	86	402	86	464	61	211	83	278
27	67	1110	68	488	77	337	82	403	58	196	84	286
28	67	1050	68	487	67	329	83	394	55	186	90	311
29	97	1480	70	493	72	500	75	336	54	176	83	305
30	94	1400	72	490	68	367	69	296	55	192	87	364
31	---	---	74	490	---	---	65	279	52	187	---	---
TOTAL	---	282612	---	21751	---	11649	---	11672	---	7207	---	7705

TOTAL LOAD FOR YEAR: 1377571 TONS.

01639000 MONOCACY RIVER AT BRIDGEPORT, MD

LOCATION.--Lat 39°40'43", long 77°14'06", Frederick County, Hydrologic Unit 02070009, on right bank 60 ft (18 m) downstream from bridge on State Highway 97 at Bridgeport, 0.9 mi (1.4 km) upstream from Cattail Branch, 3.4 mi (5.5 km) northwest of Taneytown, 4.8 mi (7.7 km) downstream from confluence of Rock and Marsh Creeks at Pennsylvania-Maryland State line, and 52 mi (83.7 km) upstream from mouth.

DRAINAGE AREA.--173 mi² (448 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1942 to current year.

REVISED RECORDS.--WSP 1382: 1944(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 15, 1947. Datum of gage is 340.83 ft (103.885 m) above mean sea level (Corps of Engineers bench mark). Prior to May 3, 1946, nonrecording gage and crest-stage gages at site 0.3 mi (0.5 km) downstream at datum 0.98 ft (0.299 m) lower.

REMARKS.--Water-discharge records good. Occasional regulation at low flow from unknown source above station.

AVERAGE DISCHARGE.--35 years, 200 ft³/s (5.664 m³/s), 15.70 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,300 ft³/s (603 m³/s) June 22, 1972, gage height, 24.05 ft (7.330 m), from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-conveyance study; no flow July 24-29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 24, 1933, reached a stage of about 25 ft (7.6 m), present site and datum, from floodmarks; stage exceeded that of June 1889, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,800 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1700	*19200	544	23.18	7.065	Apr. 2	2030	4940	140	12.06	3.676
Mar. 13	1700	4860	138	11.94	3.639	Apr. 5	0800	6270	178	13.84	4.218
Mar. 22	1900	5160	146	12.36	3.767						

Minimum discharge, 3.2 ft³/s (0.091 m³/s) Aug. 8, gage height, 1.79 ft (0.546 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	565	60	32	24	158	149	94	18	15	4.8	17
2	491	294	67	29	24	121	1810	80	35	11	4.5	9.7
3	1160	249	55	32	24	100	1300	77	19	8.0	4.2	7.5
4	493	226	55	34	26	1730	497	69	15	6.5	4.1	6.7
5	204	190	41	36	29	1630	3880	99	13	5.8	3.9	5.9
6	140	165	40	32	29	495	903	171	13	5.1	3.8	6.6
7	114	144	1200	32	27	307	432	108	23	5.8	3.7	9.3
8	753	130	572	32	24	231	341	82	23	18	3.4	16
9	11000	116	180	34	22	188	251	62	21	21	3.4	11
10	2450	111	160	34	23	163	216	55	40	15	4.9	8.3
11	578	104	150	36	97	145	188	50	29	10	11	6.2
12	329	96	160	31	964	132	163	45	20	10	13	4.9
13	248	88	159	24	929	2360	140	41	17	15	9.4	4.3
14	201	82	81	24	521	1160	125	38	15	15	9.7	3.8
15	159	79	92	27	244	416	111	36	15	10	12	3.6
16	136	86	87	30	120	282	99	33	24	7.9	14	3.5
17	119	80	87	29	85	207	89	30	20	7.5	17	3.8
18	108	79	80	26	59	275	82	28	72	20	61	3.7
19	93	76	69	24	51	353	78	32	45	19	29	4.5
20	380	73	75	23	53	233	73	35	23	19	15	4.9
21	1370	70	85	24	51	393	68	27	17	38	10	10
22	332	67	50	26	45	2330	63	24	17	20	195	7.3
23	211	65	60	25	54	1130	61	21	14	12	47	5.2
24	214	62	48	26	131	410	562	20	11	8.6	22	4.4
25	733	61	44	28	756	267	864	21	10	8.4	20	5.0
26	1970	61	48	30	296	224	245	20	11	7.3	17	11
27	492	62	52	32	216	189	152	18	11	6.2	12	28
28	298	62	52	32	252	358	119	16	14	7.8	9.9	41
29	236	89	51	30	---	464	187	15	47	6.7	8.0	26
30	198	115	39	25	---	245	126	14	24	6.3	6.8	17
31	1570	---	36	25	---	193	---	14	---	5.4	25	---
TOTAL	28100	3747	4035	904	5176	16889	13374	1475	676	371.3	604.5	296.1
MEAN	906	125	130	29.2	185	545	446	47.6	22.5	12.0	19.5	9.87
MAX	11000	565	1200	36	964	2360	3880	171	72	38	195	41
MIN	93	61	36	23	22	100	61	14	10	5.1	3.4	3.5
CFSM	5.24	.72	.75	.17	1.07	3.15	2.58	.28	.13	.07	.11	.06
IN.	6.04	.81	.87	.19	1.11	3.63	2.88	.32	.15	.08	.13	.06

CAL YR 1976 TOTAL 81296.8 MEAN 222 MAX 11000 MIN 5.1 CFSM 1.28 IN 17.48
WTR YR 1977 TOTAL 75647.9 MEAN 207 MAX 11000 MIN 3.4 CFSM 1.20 IN 16.27

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-51, 1969-72, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)
OCT											
05...	1555	192	--	--	19.5	16.0	--	--	--	--	--
13...	1030	250	190	7.5	14.0	10.0	0	8	10.9	<10	1.2
27...	1000	497	185	7.9	1.0	6.0	1	10	12.4	8	1.9
NOV											
10...	0950	112	235	7.9	6.0	2.5	1	2	13.4	3	1.0
16...	1505	88	--	--	9.5	4.0	--	--	--	--	--
24...	0945	61	235	8.1	3.0	.5	0	2	14.2	15	1.8
DEC											
08...	1020	508	153	7.5	-5.0	.0	3	30	--	28	6.8
20...	0930	72	255	7.6	5.0	.9	2	2	14.1	6	1.0
JAN											
12...	1015	30	300	7.7	-8.0	.0	1	1	13.4	6	1.1
25...	1015	29	345	7.4	.0	.0	3	1	11.9	9	1.7
FEB											
09...	1000	22	330	7.6	-5.0	.0	1	2	12.0	6	.8
23...	1015	45	295	7.5	12.0	.0	0	2	13.6	14	2.2
MAR											
09...	1000	192	240	7.5	12.0	5.0	0	5	12.7	14	2.0
23...	1000	988	155	7.6	6.0	3.0	0	35	13.2	0	1.6
APR											
06...	1000	907	165	8.0	6.0	6.0	2	20	12.2	16	1.5
20...	1000	73	171	8.9	21.5	16.5	1	3	10.8	14	2.2
MAY											
04...	0945	69	198	8.2	12.0	16.0	3	3	8.3	11	1.7
18...	0930	28	225	7.3	29.5	20.0	0	4	6.1	13	2.3
JUN											
08...	0940	24	238	7.7	13.5	15.0	0	6	7.5	19	3.4
14...	1350	14	--	--	19.0	21.5	--	--	--	--	--
22...	0945	16	252	7.9	22.0	20.5	0	40	8.8	12	3.3
JUL											
06...	0930	4.5	297	8.7	27.5	25.0	1	1	7.6	26	5.1
20...	0930	17	279	7.9	26.0	26.5	1	2	5.9	35	3.0
AUG											
03...	1015	3.9	315	8.0	23.0	23.5	2	1	7.1	20	3.6
17...	0930	9.4	364	7.5	27.5	25.0	58	5	--	--	3.6
24...	1055	22	--	--	26.0	22.5	--	--	--	--	--
31...	0945	35	243	8.1	24.0	24.0	0	30	7.1	25	5.0
SEP											
14...	1015	3.5	333	8.0	22.0	20.0	3	65	8.2	30	3.3
28...	1015	37	373	8.0	19.0	16.5	0	15	7.5	20	2.2

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	STREP-TOCOCCI (COL-ONIES PER 100 ML)	FECAL COLI-FORM .7UM-MF (COL./ 100 ML)	FECAL STREP-TOCOCCI KF AGAR (COL. PER 100 ML)	TOTAL CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT											
05...	--	--	--	--	--	--	--	--	--	--	--
13...	410	1200	--	--	--	--	--	--	--	--	--
27...	--	3200	7300	--	--	--	--	--	--	--	--
NOV											
10...	--	100	B14000	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
24...	--	280	B17000	--	--	--	--	66	54	26	10
DEC											
08...	--	3700	B45000	13	4.2	3.8	2.8	30	25	20	7.8
20...	--	43	220	--	--	--	--	--	--	--	--
JAN											
12...	--	84	B13	--	--	--	--	--	--	--	--
25...	--	83	100	--	--	--	--	--	--	--	--
FEB											
09...	--	87	B13	--	--	--	--	--	--	--	--
23...	--	160	250	--	--	--	--	--	--	--	--
MAR											
09...	--	130	970	--	--	--	--	--	--	--	--
23...	--	1600	6400	12	4.4	4.4	1.9	32	26	20	6.8
APR											
06...	--	2000	8000	--	--	--	--	--	--	--	--
20...	--	49	100	--	--	--	--	--	--	--	--
MAY											
04...	--	470	290	--	--	--	--	--	--	--	--
18...	--	210	210	--	--	--	--	--	--	--	--
JUN											
08...	--	430	790	24	7.1	11	3.5	93	76	27	16
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	670	1000	--	--	--	--	--	--	--	--
JUL											
06...	--	130	280	--	--	--	--	--	--	--	--
20...	--	1000	3900	--	--	--	--	--	--	--	--
AUG											
03...	--	320	410	--	--	--	--	--	--	--	--
17...	--	330	3000	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
31...	--	480	410	22	5.8	10	3.6	79	65	27	16
SEP											
14...	--	220	370	--	--	--	--	--	--	--	--
28...	--	610	1400	--	--	--	--	--	--	--	--

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	CHLORO-PHYLL A (UG/L)	CHLORO-PHYLL B (UG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
13...	110	9	1.9	.02	.05	.20	.11	5.2	1.16	.000
27...	101	4	1.6	.02	.04	.51	.12	6.2	.000	.000
NOV										
10...	93	7	1.4	.01	.03	.23	.11	2.7	.731	.000
16...	--	--	--	--	--	--	--	--	--	--
24...	136	2	.96	.02	.10	.35	.15	3.4	2.13	.158
DEC										
08...	103	57	1.4	.01	.13	1.1	.23	5.2	4.14	.000
20...	130	4	1.7	.02	.23	.17	.16	2.4	2.24	1.79
JAN										
12...	168	0	1.9	.02	.50	.22	.26	1.4	1.44	.000
25...	187	6	1.9	.02	.89	.11	.32	1.8	.000	.000
FEB										
09...	145	0	1.8	.02	1.0	.00	.37	5.4	1.84	.098
23...	159	1	1.6	.01	.54	.42	.20	6.0	--	--
MAR										
09...	146	12	2.3	.02	.09	.35	.09	3.2	--	--
23...	120	58	1.7	.01	.07	.76	.12	6.7	--	--
APR										
06...	95	12	1.5	.01	.05	.50	.10	--	--	--
20...	113	5	.26	.00	.01	.37	.07	7.2	--	--
MAY										
04...	133	12	.53	.01	.07	.31	.10	4.9	--	--
18...	131	3	.31	.01	.03	.65	.12	5.3	--	--
JUN										
08...	151	0	.78	.06	.22	.53	.23	6.8	2.58	.296
14...	--	--	--	--	--	--	--	--	--	--
22...	171	52	1.3	.03	.06	1.1	.38	7.5	27.2	1.99
JUL										
06...	209	11	.00	.00	.01	1.1	.28	6.0	20.2	.975
20...	161	40	.26	.01	.10	.44	.33	7.1	5.70	.000
AUG										
03...	222	43	.00	.00	.00	.76	.35	5.1	12.9	.750
17...	175	24	.01	.01	.08	.89	.37	5.7	10.6	.248
24...	--	--	--	--	--	--	--	--	--	--
31...	158	41	.07	.01	.13	.97	.35	5.6	130	8.5
SEP										
14...	213	163	.33	.00	.08	.81	.50	10	14.8	.000
28...	239	25	1.2	.04	.04	.75	.52	12	6.71	.033

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD

LOCATION.--Lat 39°36'45", long 77°14'10", Carroll County, Hydrologic Unit 02070009, on left bank 300 ft (91 m) downstream from bridge on State Highway 194, 800 ft (240 m) downstream from Bruceville, 3.5 mi (5.6 km) upstream from Detour, and confluence with Little Pipe Creek.

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--October 1947 to current year. Prior to December 1947, monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 340 ft (104 m), from topographic map.

REMARKS.--Records good. Occasional diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 109 ft³/s (3.087 m³/s), 14.51 in/yr (369 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Sept. 26, 1975, gage height, 18.98 ft (5.785 m), from rating curve extended above 3,900 ft³/s (110 m³/s) on the basis of contracted-opening measurement at gage height 17.86 ft (5.444 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1030	*4030	114	9.52	2.902	Apr. 2	1430	1950	55.2	6.43	1.960
Mar. 22	1400	1710	48.4	5.98	1.823	Apr. 5	0030	3510	99.4	8.87	2.704

Minimum discharge, 14 ft³/s (0.40 m³/s) Sept. 30, gage height, 0.83 ft (0.253 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	187	63	48	46	79	97	75	39	35	22	30
2	215	137	68	56	46	70	710	72	65	31	20	27
3	403	121	60	54	46	63	392	74	43	27	19	21
4	162	113	65	57	48	552	347	72	37	27	21	25
5	88	103	60	56	50	300	1860	97	35	27	20	21
6	73	96	60	54	46	173	467	103	39	26	18	21
7	65	91	402	60	44	132	314	90	48	27	17	20
8	172	86	174	55	42	108	261	75	40	47	17	19
9	1610	80	101	62	44	97	209	67	53	29	18	19
10	310	80	91	65	50	90	185	65	62	29	27	19
11	164	77	86	55	90	83	165	63	45	28	69	17
12	120	73	87	50	300	80	146	60	40	28	28	16
13	104	71	83	46	250	621	131	58	38	29	31	15
14	92	69	67	50	150	344	121	56	36	36	34	16
15	82	68	74	55	100	194	110	53	38	24	50	15
16	75	66	68	50	80	149	106	51	36	21	29	16
17	71	68	68	46	65	117	100	51	41	24	40	18
18	70	74	64	44	55	142	96	50	137	73	74	21
19	64	71	60	46	60	120	93	50	53	32	31	18
20	218	69	63	48	60	115	89	48	39	55	28	23
21	339	68	73	48	55	121	85	46	39	43	27	21
22	129	67	54	46	50	746	83	46	35	28	70	16
23	102	64	65	46	60	357	82	45	33	25	36	18
24	109	63	60	46	90	221	95	42	31	22	30	18
25	184	64	55	50	210	171	145	43	30	25	31	18
26	372	65	60	50	121	146	99	44	32	32	24	23
27	162	66	62	50	92	127	86	41	30	24	22	22
28	123	66	62	50	100	166	84	39	77	21	21	25
29	109	95	59	46	---	157	102	37	125	21	21	22
30	102	81	60	46	---	121	81	37	43	21	20	19
31	447	---	64	46	---	108	---	38	---	24	23	---
TOTAL	6556	2499	2538	1581	2450	6070	6941	1788	1439	941	938	599
MEAN	211	83.3	81.9	51.0	87.5	196	231	57.7	48.0	30.4	30.3	20.0
MAX	1610	187	402	65	300	746	1860	103	137	73	74	30
MIN	64	63	54	44	42	63	81	37	30	21	17	15
CFSM	2.07	.82	.80	.50	.86	1.92	2.27	.57	.47	.30	.30	.20
IN.	2.39	.91	.93	.58	.89	2.21	2.53	.65	.52	.34	.34	.22

CAL YR 1976 TOTAL 45187 MEAN 123 MAX 1720 MIN 21 CFSM 1.21 IN 16.48
WTR YR 1977 TOTAL 34340 MEAN 94.1 MAX 1860 MIN 15 CFSM .92 IN 12.52

01640500 OWENS CREEK AT LANTZ, MD

LOCATION.--Lat 39°40'36", long 77°27'50", Frederick County, Hydrologic Unit 02070009, on right bank 0.5 mi (0.8 km) west of Lantz Post Office (Deerfield station on Western Maryland Railway), 1.5 mi (2.4 km) south of Sabillasville, 4.5 mi (7.2 km) northwest of Thurmont, and 14.2 mi (22.8 km) upstream from mouth.

DRAINAGE AREA.--5.93 mi^2 (15.36 km^2).

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 921: 1932(m). WSP 1202: 1935(M). WSP 1382: Drainage area. WSP 1432: 1937(M), 1943(M), 1949(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 965 ft (294 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 9.13 ft^3/s (0.259 m^3/s), 20.91 in/yr (531 mm/yr), adjusted for diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,270 ft^3/s (92.6 m^3/s) Dec. 1, 1934, gage height, 8.4 ft (2.56 m), from rating curve extended above 750 ft^3/s (21.2 m^3/s) on basis of slope-area measurements at gage heights 5.11 ft (1.558 m) and 6.30 ft (1.920 m); no flow Sept. 2-11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft^3/s (3.4 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 1	0415	355	10.1	3.78	1.152	Mar. 22	1300	146	4.13	3.00	0.914
Oct. 9	0930	*2180	61.7	7.13	2.173	Apr. 2	1245	165	4.67	3.09	0.942
Oct. 25	2200	120	3.40	2.86	0.872	Apr. 5	0015	334	9.46	3.71	1.131
Mar. 13	0745	158	4.47	3.06	0.933						

Minimum discharge, 0.32 ft^3/s (0.009 m^3/s) Sept. 12, gage height, 0.94 ft (0.287 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	24	6.4	4.8	2.8	8.8	16	8.2	5.6	1.4	.73	.49
2	45	22	6.0	4.6	2.8	7.8	53	8.4	3.9	1.3	.65	.46
3	49	20	5.2	4.8	3.0	7.4	37	7.7	3.2	1.2	.64	.44
4	28	19	5.4	4.7	3.2	39	48	7.8	3.0	1.2	.64	.44
5	20	18	5.4	4.5	3.2	28	104	23	3.0	1.2	.59	.44
6	16	16	5.2	4.4	2.9	20	45	16	5.3	1.2	.57	.46
7	14	15	33	4.6	2.7	17	35	13	3.9	1.3	.55	.51
8	36	14	14	4.4	2.5	15	30	12	3.1	1.3	.55	.50
9	376	13	15	4.3	2.7	13	24	11	8.2	1.2	.62	.48
10	72	13	10	4.6	3.2	12	22	10	5.0	1.3	2.6	.57
11	48	12	10	4.1	5.8	11	20	9.3	3.5	1.5	1.6	.41
12	39	12	10	3.9	8.9	11	18	8.6	3.0	2.2	.82	.35
13	33	11	8.9	3.8	12	66	16	8.0	2.8	1.9	1.0	.36
14	28	11	8.7	4.1	8.3	34	15	7.6	2.9	1.2	1.4	.39
15	25	10	8.1	4.1	7.2	26	14	7.0	3.2	1.0	1.0	.41
16	22	9.7	8.2	4.0	5.9	21	13	6.6	2.7	1.0	.77	.48
17	21	9.4	7.9	3.8	6.9	19	12	6.2	2.5	1.2	4.0	.60
18	19	9.1	7.2	3.9	5.6	21	11	6.1	2.6	1.7	1.4	.48
19	18	8.7	6.9	3.8	4.5	17	11	6.2	2.2	1.0	.72	.44
20	39	8.2	7.5	3.7	4.6	18	11	5.6	2.1	4.4	.64	1.2
21	36	8.1	6.5	3.6	4.3	17	9.6	5.2	2.0	1.5	.70	.41
22	24	7.6	6.0	3.5	5.0	59	9.0	4.9	1.8	1.5	2.6	.36
23	21	7.1	6.0	3.4	7.7	36	10	4.8	1.7	.90	.90	.37
24	27	6.9	5.4	3.5	16	28	19	4.7	1.7	.85	1.0	.39
25	41	7.0	5.5	3.6	15	23	14	4.7	1.8	2.1	1.0	.87
26	53	6.9	6.3	3.6	11	21	11	4.3	2.0	1.8	.64	1.7
27	35	6.9	6.1	3.5	11	19	9.8	3.9	1.6	.95	.59	2.7
28	29	6.7	5.9	3.4	10	27	11	3.8	3.3	.85	.56	2.8
29	26	9.9	5.6	3.4	---	21	11	3.6	2.8	.81	.53	.69
30	26	6.5	5.5	3.1	---	18	8.8	3.7	1.6	.88	.52	.51
31	42	---	5.0	2.9	---	17	---	4.0	---	.81	.53	---
TOTAL	1432	348.7	252.8	122.4	178.7	698.0	668.2	235.9	92.0	42.65	31.06	20.71
MEAN	46.2	11.6	8.15	3.95	6.38	22.5	22.3	7.61	3.07	1.38	1.00	.69
MAX	376	24	33	4.8	16	66	104	23	8.2	4.4	4.0	2.8
MIN	14	6.5	5.0	2.9	2.5	7.4	8.8	3.6	1.6	.81	.52	.35
CFSM	7.79	1.96	1.37	.67	1.08	3.79	3.76	1.28	.52	.23	.17	.12
IN.	8.[illegible]	2.19	1.59	.77	1.12	4.38	4.19	1.48	.58	.27	.19	.13

CAL YR 1976 TOTAL 4676.25 MEAN 12.8 MAX 376 MIN .82 CFSM 2.16 IN 29.33
WTR YR 1977 TOTAL 4123.12 MEAN 11.3 MAX 376 MIN .35 CFSM 1.[illegible] IN 25.86

01641000 HUNTING CREEK AT JIMTOWN, MD

LOCATION.--Lat 39°35'40", long 77°23'50", Frederick County, Hydrologic Unit 02070009, on right bank just downstream from highway bridge, 0.4 mi (0.6 km) southwest of Jimtown, about 2.2 mi (3.5 km) southeast of Thurmont, 2.2 mi (3.5 km) upstream from Little Hunting Creek, and 5.2 mi (8.4 km) upstream from mouth.

DRAINAGE AREA.--18.4 mi^2 (47.7 km^2).

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1332: 1952.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 355 ft (108 m), from topographic map.

REMARKS.--Records good. Slight regulation at irregular intervals caused by pumpage at recreation camp near Foxville, and from occasional draining and refilling of pond near Thurmont by Maryland Game and Inland Fish Commission. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 25.7 ft^3/s (0.728 m^3/s), 18.97 in/yr (482 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,670 ft^3/s (75.6 m^3/s) Oct. 9,, 1976, gage height, 6.32 ft (1.926 m); minimum, 0.4 ft^3/s (0.011 m^3/s) Sept. 9, 1966, gage height, 1.48 ft (0.451 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft^3/s (9.9 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1000	*2670	75.6	6.32	1.926	Apr. 2	1200	566	16.0	3.54	1.079
Mar. 13	0730	868	24.6	4.09	1.247	Apr. 5	0130	809	22.9	3.99	1.216

Minimum discharge, 2.1 ft^3/s (0.059 m^3/s) Aug. 24, gage height, 1.56 ft (0.475 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	72	20	19	11	16	41	25	8.6	6.3	3.4	3.4
2	127	60	20	18	11	17	180	24	8.1	4.6	3.0	3.2
3	159	56	18	18	11	21	117	23	7.2	3.8	3.1	3.1
4	81	52	17	18	12	106	126	22	6.6	4.2	3.0	2.9
5	54	48	17	16	12	75	389	32	6.6	4.0	2.9	2.6
6	41	43	17	16	11	71	157	35	9.8	3.9	2.9	3.0
7	35	40	74	16	9.5	65	105	29	8.9	3.8	3.1	3.5
8	113	37	34	16	9.5	64	89	25	7.6	3.8	3.7	3.4
9	1330	35	27	15	9.5	65	76	21	15	4.0	3.2	4.7
10	256	34	26	15	10	55	68	18	11	3.9	9.7	5.0
11	130	31	26	14	21	52	64	17	9.1	11	5.5	4.7
12	89	29	26	14	24	45	59	16	7.6	7.2	4.1	4.7
13	73	27	25	14	28	264	53	15	7.0	5.3	6.5	4.6
14	62	26	23	15	23	121	31	14	6.8	4.4	5.7	4.6
15	53	27	24	14	17	95	30	13	6.8	4.1	4.7	4.6
16	47	25	24	13	12	83	36	12	6.3	3.9	4.1	4.7
17	41	24	24	13	11	74	35	12	6.0	5.0	7.2	4.9
18	37	23	23	13	11	67	34	12	6.8	5.7	4.9	4.6
19	35	22	22	14	11	42	32	12	5.9	4.1	4.0	4.4
20	73	21	25	15	11	43	30	11	4.8	8.3	3.8	4.9
21	84	21	24	14	10	37	29	9.9	4.6	4.2	4.2	4.3
22	57	22	22	13	11	140	27	9.6	4.0	4.0	7.2	4.4
23	48	22	21	13	12	73	28	9.3	3.6	3.4	3.7	4.3
24	62	22	20	14	21	68	49	9.5	3.7	3.4	3.0	4.4
25	87	22	22	15	22	63	48	9.2	4.0	5.7	3.9	4.7
26	140	22	22	14	17	57	37	8.9	4.6	4.8	3.3	7.9
27	83	21	21	14	18	52	33	8.3	4.0	3.3	3.4	5.8
28	66	21	21	13	17	65	32	7.7	31	3.3	3.4	5.9
29	58	28	20	13	---	59	31	7.5	14	3.3	3.4	4.5
30	57	21	20	13	---	52	28	7.3	7.8	3.7	3.5	4.3
31	123	---	19	12	---	46	---	7.7	---	3.4	3.6	---
TOTAL	3876	954	744	454	403.5	2153	2094	482.9	237.8	143.8	131.1	132.0
MEAN	125	31.8	24.0	14.6	14.4	69.5	69.8	15.6	7.93	4.64	4.23	4.40
MAX	1330	72	74	19	28	264	389	35	31	11	9.7	7.9
MIN	35	21	17	12	9.5	16	27	7.3	3.6	3.3	2.9	2.6
CFSM	6.79	1.73	1.30	.79	.78	3.78	3.79	.85	.43	.25	.23	.24
IN.	7.84	1.93	1.50	.92	.82	4.35	4.23	.98	.48	.29	.27	.27

CAL YR 1976 TOTAL 13328.7 MEAN 36.4 MAX 1330 MIN 4.0 CFSM 1.98 IN 26.95
WTR YR 1977 TOTAL 11806.1 MEAN 32.3 MAX 1330 MIN 2.6 CFSM 1.76 IN 23.87

01641500 FISHING CREEK NEAR LEWISTOWN, MD

LOCATION.--Lat 39°31'35", long 77°28'00", Frederick County, Hydrologic Unit 02070009, on left bank immediately upstream from Fishing Creek Reservoir, 50 ft (15 m) downstream from Little Fishing Creek, 2.8 mi (4.5 km) west of Lewistown, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--7.29 mi² (18.88 km²).

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1432: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 735 ft (224 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 11.3 ft³/s (0.320 m³/s), 21.05 in/yr (535 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,200 ft³/s (62.3 m³/s) Oct. 9, 1976, gage height, 5.75 ft (1.753 m), from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of slope-area measurement at gage height 3.73 ft (1.137 m), and computation of flow over dam at gage height 5.75 ft (1.753 m); minimum, 0.6 ft³/s (0.017 m³/s) Sept. 10, 11, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	0930	*2200	62.3	5.75	1.753	Apr. 5	0230	110	3.12	2.37	0.722

Minimum discharge, 1.4 ft³/s (0.040 m³/s) many days in September, gage height, 1.14 ft (0.347 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	32	8.5	7.2	4.2	8.8	22	12	5.0	3.6	2.5	1.9
2	26	31	8.5	7.4	4.2	8.5	46	12	4.6	3.2	2.4	1.8
3	61	30	8.0	7.2	4.2	8.4	47	12	4.3	3.0	2.5	1.8
4	41	29	7.6	6.9	4.1	21	50	12	4.1	2.8	2.4	1.8
5	31	26	7.6	6.8	4.1	22	90	12	4.2	2.8	2.4	1.8
6	26	24	7.4	6.5	3.7	21	71	12	5.0	2.7	2.3	1.7
7	23	23	18	6.8	3.6	20	58	12	4.5	2.6	2.9	1.7
8	39	22	12	6.4	3.5	19	50	11	4.2	2.6	3.9	1.7
9	417	20	11	6.4	3.5	18	43	10	7.6	2.7	2.4	1.7
10	133	20	11	6.7	3.7	17	37	9.8	4.6	2.6	2.6	1.8
11	84	18	11	6.2	4.4	16	33	9.5	4.0	2.8	2.6	1.5
12	64	17	11	6.1	5.1	15	30	9.1	3.9	2.9	2.5	1.5
13	52	16	10	6.3	6.3	51	28	8.7	3.8	2.6	3.5	1.5
14	43	15	9.7	6.2	6.2	45	26	8.6	3.7	2.4	3.3	1.5
15	35	15	10	6.2	6.1	40	23	8.2	3.9	2.2	2.8	1.5
16	30	14	10	5.8	5.8	35	22	7.8	3.6	2.1	2.5	1.7
17	27	14	10	5.5	5.4	30	20	7.6	4.4	2.6	4.2	1.8
18	24	13	9.6	5.5	5.4	29	19	7.4	4.3	3.7	3.1	1.5
19	22	13	9.3	5.5	5.5	25	18	7.2	3.6	2.2	2.4	1.6
20	29	12	10	5.5	5.7	24	17	7.1	3.4	3.9	2.5	1.9
21	28	12	10	5.5	5.4	23	16	6.7	3.4	2.4	2.8	1.5
22	23	11	8.9	5.0	5.4	39	15	6.5	3.0	2.2	4.1	1.5
23	22	10	8.8	5.0	6.2	37	15	6.3	2.9	2.0	2.4	1.5
24	26	9.7	8.5	5.0	9.4	34	17	6.3	2.9	2.0	2.9	1.5
25	30	9.7	8.4	5.0	9.9	33	18	5.9	3.0	4.4	2.5	1.6
26	42	9.3	8.6	5.5	9.1	31	15	5.7	3.0	4.0	2.1	3.1
27	39	9.3	8.4	5.0	9.4	28	14	5.3	2.7	2.8	2.1	2.0
28	37	9.1	8.4	4.8	9.1	31	14	5.1	20	2.7	2.0	2.4
29	33	11	8.1	4.6	---	26	14	5.0	9.8	2.6	2.0	1.6
30	31	9.2	7.5	4.6	---	24	13	4.9	4.3	2.8	1.9	1.5
31	40	---	7.2	4.4	---	23	---	5.1	---	2.6	1.9	---
TOTAL	1587	504.3	293.0	181.5	158.6	802.7	901	258.8	141.7	86.5	82.4	51.9
MEAN	51.2	16.8	9.45	5.85	5.66	25.9	30.0	8.35	4.72	2.79	2.66	1.73
MAX	417	32	18	7.4	9.9	51	90	12	20	4.4	4.2	3.1
MIN	22	9.1	7.2	4.4	3.5	8.4	13	4.9	2.7	2.0	1.9	1.5
CFSM	7.02	2.31	1.30	.80	.78	3.55	4.12	1.15	.65	.38	.37	.24
IN.	8.10	2.57	1.49	.93	.81	4.10	4.60	1.32	.72	.44	.42	.26

CAL YR 1976 TOTAL 5568.1 MEAN 15.2 MAX 417 MIN 2.2 CFSM 2.09 IN 28.41
WTR YR 1977 TOTAL 5049.4 MEAN 13.8 MAX 417 MIN 1.5 CFSM 1.89 IN 25.76

01641810 MONOCACY RIVER NEAR WALKERSVILLE, MD

LOCATION.--Lat 39°28'47", long 77°23'18", Frederick County, Hydrologic Unit 02070009, at Biggs Ford Bridge on Biggs Ford Road, 2.0 mi (3.2 km) west of Walkersville, 4.7 mi (7.6 km) north of Frederick, 9.3 mi (15.0 km) upstream from Linganore Creek, and 26.5 mi (42.6 km) upstream from mouth.

DRAINAGE AREA.--637 mi² (1,650 km²), approximately.

PERIOD OF RECORD.--Water years 1974 to current year.

REMARKS.--Records of discharge are based on records for station 01643000 Monocacy River at Jug Bridge near Frederick, adjusted on the basis of the drainage area ratio.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)
OCT											
13...	1230	1270	185	7.6	16.5	11.0	1	9	10.4	<10	1.0
27...	1200	2050	180	7.6	4.0	7.0	1	10	11.8	9	1.9
NOV											
10...	1115	613	215	7.8	7.0	3.5	1	2	13.0	1	1.0
24...	1115	363	235	8.2	4.0	1.5	1	2	15.0	7	1.2
DEC											
08...	1230	2320	158	7.4	-3.0	.0	2	80	--	25	8.6
20...	1100	395	235	7.9	7.5	2.0	2	3	14.4	3	.8
JAN											
12...	1230	230	220	8.1	-7.0	.0	1	1	15.2	2	.8
25...	1200	278	255	7.5	1.0	.0	1	1	13.2	6	1.4
FEB											
09...	1200	195	270	7.7	1.0	.0	2	2	15.4	3	.4
23...	1130	273	240	7.8	11.0	.0	0	2	15.6	0	.7
MAR											
09...	1140	768	200	7.6	12.0	6.0	0	6	12.7	12	1.4
23...	1130	7570	155	7.4	7.0	3.0	0	100	12.8	13	3.4
APR											
06...	1130	5180	160	7.5	8.0	6.5	1	40	12.4	16	1.8
20...	1130	546	166	8.8	16.0	16.0	2	3	10.2	9	1.7
MAY											
04...	1115	409	180	7.8	13.0	16.5	50	2	8.1	10	1.6
18...	1050	254	202	7.8	30.0	20.5	1	4	7.7	9	1.8
JUN											
08...	1110	200	229	7.7	16.0	16.0	1	8	8.7	11	1.6
22...	1100	167	238	7.8	24.5	21.0	1	60	7.0	25	1.8
JUL											
06...	1045	110	261	8.4	32.0	26.0	1	1	8.3	17	3.4
20...	1100	169	234	8.1	29.0	27.5	2	1	7.9	25	4.6
AUG											
03...	1145	83	265	8.1	23.5	24.0	2	2	7.9	15	3.0
17...	1115	129	252	7.8	26.5	26.0	2	5	--	10	1.6
31...	1140	104	270	8.0	28.5	25.0	0	50	6.8	15	1.6
SEP											
14...	1145	68	279	7.9	20.5	20.0	3	35	7.5	15	4.1
28...	1130	129	256	7.9	18.0	17.0	2	35	8.2	20	1.9

01641810 MONOCACY RIVER NEAR WALKERSVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	STREP-TOCOCCI (COL-ONIES PER 100 ML)	FECAL COLI-FORM .7UM-MF (COL./ 100 ML)	FECAL STREP-TOCOCCI KF AGAR (COL. PER 100 ML)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	TOTAL CAL-CIUM (CA) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)
OCT										
13...	400	970	--	66	21	18	19	4.8	4.6	3.8
27...	--	B6600	B11000	63	22	18	17	4.9	4.9	4.3
NOV										
10...	--	59	3100	79	25	22	23	5.3	5.3	5.2
24...	--	28	B4000	87	25	24	25	5.5	5.9	5.5
DEC										
08...	--	B7400	B47000	52	22	15	15	4.8	3.6	3.6
20...	--	28	1700	82	26	24	24	5.8	5.4	5.3
JAN										
12...	--	B4	B13	89	32	25	26	11	5.9	7.3
25...	--	611	80	95	31	34	28	6.2	6.0	8.4
FEB										
09...	--	88	67	100	36	28	30	5.8	6.3	6.6
23...	--	B4	69	86	31	24	25	5.5	5.8	6.9
MAR										
09...	--	31	230	66	29	19	18	5.9	5.2	5.6
23...	--	4200	B11000	50	25	13	14	5.1	3.6	4.4
APR										
06...	--	2900	B100	56	24	13	15	4.0	4.5	3.6
20...	--	170	250	72	18	18	21	4.5	4.7	4.6
MAY										
04...	--	270	210	81	26	20	23	5.1	5.6	4.9
18...	--	150	100	88	25	25	26	5.6	5.6	5.3
JUN										
08...	--	660	310	99	30	28	30	5.5	5.8	6.2
22...	--	1400	2100	98	29	27	30	6.1	5.7	6.4
JUL										
06...	--	1500	360	110	23	33	35	6.5	6.3	7.2
20...	--	1100	1800	100	25	29	32	6.0	5.9	7.2
AUG										
03...	--	360	1300	110	23	33	35	6.6	6.3	7.8
17...	--	400	900	110	25	31	33	6.4	6.0	6.7
31...	--	530	220	110	22	32	35	6.6	6.1	8.4
SEP										
14...	--	170	410	110	24	33	35	6.4	6.6	8.6
28...	--	560	730	110	20	32	34	6.7	6.1	8.5

DATE	DIS-SOLVED SODIUM (NA) (MG/L)	TOTAL PO-TAS-SIUM (K) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRATE (N) (MG/L)
OCT										
13...	3.9	2.0	2.1	55	45	18	7.4	100	12	2.0
27...	3.8	2.5	2.8	49	40	19	6.4	99	11	1.4
NOV										
10...	5.2	1.6	1.8	66	54	18	7.8	79	5	2.1
24...	5.1	1.5	1.4	75	62	18	8.4	128	2	2.0
DEC										
08...	3.9	3.9	3.9	37	30	17	8.2	96	183	1.4
20...	5.7	1.6	1.6	68	56	20	8.6	134	3	2.3
JAN										
12...	7.7	1.5	1.7	70	57	18	12	135	3	2.7
25...	6.6	2.0	1.8	78	64	16	11	134	5	2.8
FEB										
09...	7.9	1.6	1.8	79	65	16	12	117	0	2.9
23...	7.2	1.8	2.0	67	55	20	12	135	4	2.5
MAR										
09...	5.8	1.8	2.1	46	38	21	10	131	13	2.3
23...	4.3	2.5	2.4	30	25	16	6.1	111	312	1.5
APR										
06...	4.0	2.0	2.1	39	32	16	6.1	88	135	1.7
20...	4.8	1.5	1.6	65	53	14	7.4	105	1	1.3
MAY										
04...	5.2	1.6	1.8	66	54	15	8.4	118	12	1.3
18...	5.5	1.8	2.1	77	63	14	8.3	106	1	1.5
JUN										
08...	6.8	2.3	2.5	84	69	13	11	126	8	2.3
22...	6.7	3.9	4.2	84	69	19	11	151	74	2.6
JUL										
06...	7.6	3.3	3.3	110	90	14	13	196	126	2.0
20...	7.6	3.7	4.0	97	80	15	12	147	70	1.1
AUG										
03...	8.6	3.0	3.2	110	90	15	14	185	28	1.1
17...	3.9	3.6	4.0	100	82	15	12	163	83	.77
31...	8.8	4.0	3.9	110	90	16	15	167	59	1.7
SEP										
14...	10	3.3	3.6	110	90	17	15	178	244	1.6
28...	9.0	3.3	3.4	110	90	16	14	155	60	1.8

01641810 MONOCACY RIVER NEAR WALKERSVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT										
13...	.02	.02	.21	.12	50	0	0	<10	0	220
27...	.01	.04	.46	.10	470	1	0	10	2	730
NOV										
10...	.01	.00	.11	.07	60	0	0	30	1	110
24...	.01	.01	.11	.06	80	1	0	20	0	110
DEC										
08...	.02	.14	1.6	.32	4400	2	0	10	9	4800
20...	.01	.03	.07	.07	60	1	0	10	3	110
JAN										
12...	.01	.04	.04	.08	80	0	0	<10	2	50
25...	.02	.25	.30	.12	50	1	0	<10	3	110
FEB										
09...	.03	.18	.11	.13	40	1	0	<10	4	70
23...	.02	.06	.11	.09	80	1	0	20	3	130
MAR										
09...	.01	.03	.18	.07	150	0	0	40	0	250
23...	.02	.10	1.2	.28	6000	1	0	20	24	8700
APR										
06...	.02	.06	.64	.13	1400	1	0	20	0	2500
20...	.02	.01	.37	.05	200	1	0	<10	2	140
MAY										
04...	.01	.05	.27	.06	170	1	0	<10	3	290
18...	.03	.03	.46	.09	200	0	0	<10	12	320
JUN										
08...	.02	.05	.27	.13	310	1	0	10	5	500
22...	.07	.07	.63	.24	30	1	0	10	6	2500
JUL										
06...	.01	.03	1.1	.20	1500	3	0	10	6	2400
20...	.02	.09	1.3	.21	940	2	0	<10	5	1300
AUG										
03...	.01	.04	1.2	.17	1600	0	0	<10	10	2000
17...	.02	.05	.59	.19	1000	0	0	<10	9	1800
31...	.01	.03	.73	.21	1100	1	0	10	6	1500
SEP										
14...	.01	.06	.25	.19	1100	0	0	<10	7	1600
28...	.01	.03	.71	.29	1900	1	0	<10	6	2700

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	OIL AND GREASE (MG/L)	CHLORO-PHYLL A (UG/L)	CHLORO-PHYLL B (UG/L)
OCT										
13...	40	11	20	10	0	10	3.9	1	.857	.000
27...	60	7	30	10	0	0	5.8	0	.000	.000
NOV										
10...	40	4	10	10	0	0	5.4	0	.795	.000
24...	30	8	10	0	0	60	3.3	0	1.39	0.77
DEC										
08...	380	15	190	60	0	80	4.8	0	8.14	.022
20...	60	7	20	20	0	10	2.2	2	2.22	.596
JAN										
12...	40	1	10	10	0	10	1.1	0	.000	.000
25...	20	5	40	0	0	0	.8	0	3.37	.000
FEB										
09...	20	8	20	10	0	10	6.4	0	--	--
23...	30	6	20	20	0	10	4.6	1	.787	.897
MAR										
09...	60	5	20	10	0	0	4.0	1	--	--
23...	60	20	260	20	1	50	13	1	--	--
APR										
06...	80	0	110	20	0	10	--	1	--	--
20...	50	7	20	10	0	0	7.0	2	--	--
MAY										
04...	80	4	20	20	0	10	4.3	1	--	--
18...	160	11	40	10	0	10	6.3	3	--	--
JUN										
08...	30	6	50	50	0	30	6.5	1	1.12	.000
22...	60	20	90	20	0	10	9.2	0	.665	.000
JUL										
06...	60	6	150	30	0	20	7.3	0	87.6	2.57
20...	50	11	160	30	0	10	7.9	0	41.9	.000
AUG										
03...	30	17	150	30	0	20	5.2	0	23.4	1.25
17...	50	27	120	40	0	20	5.9	0	2.30	.000
31...	10	14	140	50	0	0	6.7	0	16.2	2.05
SEP										
14...	30	32	130	40	0	20	8.2	2	6.36	.882
28...	30	0	170	20	0	20	15	0	12.2	1.94

01642500 LINGANORE CREEK NEAR FREDERICK, MD

LOCATION.--Lat 39°24'55", long 77°20'00", Frederick County, Hydrologic Unit 02070009, on left bank 2.4 mi (3.9 km) upstream from mouth and 4 mi (6.4 km) east of Frederick.

DRAINAGE AREA.--82.3 mi² (213.2 km²).

PERIOD OF RECORD.--November 1931 to March 1932, September 1934 to current year.

REVISED RECORDS.--WSP 891: 1938-39. WSP 1432: 1934, 1936, 1937(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 23, 1946. Altitude of gage is 270 ft (82 m), from topographic map. Prior to Mar. 27, 1932, nonrecording gage at Frederick pumping station, 1.5 mi (2.4 km) downstream at datum about 20 ft (6.1 m) lower. Sept. 12, 1934, to Sept. 25, 1946, nonrecording gage at present site and datum.

REMARKS.--Records good. Occasional regulation by Linganore Reservoir 0.5 mi (0.8 km) upstream beginning September 1972, total capacity, 883,200,000 gal (3.343 hm³). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 84.8 ft³/s (2.402 m³/s), 13.99 in/yr (355 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,100 ft³/s (569 m³/s) June 22, 1972, gage height, 19.46 ft (5.931 m), from high-water mark in well, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement at gage height 10.01 ft (3.051 m) and contracted-opening measurement at gage height 19.46 ft (5.931 m) at site 2.6 mi (4.2 km) upstream, adjusted for flow from intervening area; minimum discharge, 1.4 ft³/s (0.040 m³/s) Nov. 24, 1972, gage height, 1.10 ft (0.335 m), result of regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1315	*3170	89.8	9.40	2.865	Apr. 5	0600	2770	78.4	8.73	2.661

Minimum discharge, 3.0 ft³/s (0.085 m³/s) Sept. 9; minimum daily, 5.6 ft³/s (0.16 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	168	55	38	37	59	79	69	37	26	13	15
2	230	129	58	41	36	54	375	67	42	22	13	14
3	475	117	50	43	36	50	275	67	36	17	13	14
4	164	112	51	46	39	137	232	68	33	18	14	14
5	96	101	50	45	41	164	1540	82	32	19	14	13
6	74	94	51	43	35	102	428	103	38	18	20	13
7	64	87	232	48	34	86	282	101	40	18	18	12
8	131	82	157	42	33	75	233	74	34	25	17	79
9	1600	78	90	45	33	68	195	63	54	22	17	55
10	347	78	79	49	39	63	175	60	61	19	29	13
11	173	75	76	41	91	59	160	59	43	20	100	8.4
12	131	74	76	40	158	58	146	56	39	22	30	8.5
13	112	70	73	37	146	227	134	54	36	20	49	8.5
14	99	69	61	42	102	270	127	53	33	17	40	8.5
15	86	69	62	46	78	147	118	50	35	14	38	8.5
16	78	67	63	44	62	117	111	48	33	19	26	8.5
17	75	65	63	34	50	96	106	47	33	13	358	8.5
18	72	66	59	34	47	98	100	47	74	17	160	7.3
19	67	64	57	37	51	90	96	49	43	19	39	5.6
20	162	62	59	42	52	83	90	46	47	24	26	5.7
21	281	61	63	42	48	86	86	46	55	25	22	5.7
22	125	60	45	42	44	433	84	42	36	24	20	5.7
23	99	57	55	40	48	291	82	38	32	17	22	5.7
24	105	57	46	40	58	170	82	40	29	13	23	5.8
25	147	58	47	43	98	136	88	42	28	16	19	6.0
26	226	58	56	43	71	119	84	42	26	28	17	6.0
27	142	59	53	42	67	107	77	38	24	22	17	6.0
28	117	58	52	40	68	116	76	36	28	17	17	6.0
29	104	81	52	36	---	119	85	35	45	19	16	6.6
30	98	72	42	35	---	99	74	32	33	13	17	8.8
31	313	---	48	36	---	88	---	35	---	10	16	---
TOTAL	6208	2348	2081	1276	1702	3867	5820	1689	1159	593	1240	382.3
MEAN	200	78.3	67.1	41.2	60.8	125	194	54.5	38.6	19.1	40.0	12.7
MAX	1600	168	232	49	158	433	1540	103	74	28	358	79
MIN	64	57	42	34	33	50	74	32	24	10	13	5.6
CFSM	2.43	.95	.82	.50	.74	1.52	2.36	.66	.47	.23	.49	.15
IN.	2.81	1.06	.94	.58	.77	1.75	2.63	.76	.52	.27	.56	.17

CAL YR 1976 TOTAL 40090.0 MEAN 110 MAX 1720 MIN 14 CFSM 1.34 IN 18.12
WTR YR 1977 TOTAL 28365.3 MEAN 77.7 MAX 1600 MIN 5.6 CFSM .94 IN 12.82

01643000 MONOCACY RIVER AT JUG BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°24'13", long 77°21'58", Frederick County, Hydrologic Unit 02070009, on right bank 0.2 mi (0.3 km) upstream from Jug Bridge on U.S. Highway 40, 0.4 mi (0.6 km) downstream from Linganore Creek, 2 mi (3.2 km) east of Frederick, and 16.9 mi (27.2 km) upstream from mouth.

DRAINAGE AREA.--817 mi^2 (2,116 km^2).

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for October, November 1929, published in WSP 1302.

REVISED RECORDS.--WSP 711: 1930.

GAGE.--Water-stage recorder. Nonrecording gage at site 0.2 mile (0.3 km) downstream. Datum of gage is 231.92 ft (70.689 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 912 ft^3/s (25.83 m^3/s), 15.16 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,600 ft^3/s (2,310 m^3/s) June 23, 1972, gage height, 35.9 ft (10.94 m), from floodmark; minimum daily, 19 ft^3/s (0.54 m^3/s) Sept. 7-13, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1889 reached a stage of 30 ft (9.1 m), from floodmarks, discharge, 56,000 ft^3/s (1,590 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,800 ft^3/s (250 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	0530	*43500	1230	25.38	7.736	Mar. 23	0730	12300	348	12.52	3.816
Mar. 5	0800	9570	271	10.84	3.304	Apr. 3	0700	11600	329	12.09	3.685
Mar. 14	0500	12200	346	12.45	3.795	Apr. 5	2130	20200	572	16.64	5.072

Minimum discharge, 86 ft^3/s (2.44 m^3/s) Sept. 14-17, gage height, 1.15 ft (0.351 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	3500	528	320	260	820	988	633	229	243	113	110
2	3430	1820	465	340	260	639	3040	578	255	190	110	131
3	5390	1500	380	340	240	557	8190	565	324	161	106	127
4	3210	1380	397	340	280	1620	2930	549	235	148	105	110
5	1430	1250	407	340	300	7100	15100	592	209	143	103	105
6	979	1110	391	320	280	2340	9120	962	222	139	113	104
7	795	1010	1920	340	260	1540	3390	818	236	134	107	99
8	1490	934	3550	320	240	1220	2660	640	243	141	102	155
9	22200	854	1170	320	240	1040	2090	537	303	171	104	154
10	35400	818	932	340	246	913	1730	485	372	159	117	108
11	4750	789	846	340	397	824	1520	462	327	154	265	99
12	2340	738	823	300	1200	761	1360	435	268	169	233	93
13	1710	699	823	260	1640	3880	1220	410	232	165	180	90
14	1410	663	702	300	1420	8210	1100	394	214	145	184	87
15	1180	644	567	300	1000	2650	984	375	216	155	178	86
16	1030	623	622	300	694	1830	921	360	215	136	171	86
17	915	604	605	280	526	1410	864	344	215	124	609	90
18	844	591	583	260	469	1260	814	336	574	144	546	92
19	766	579	547	260	439	1540	769	328	481	231	324	95
20	1130	556	523	280	419	1190	728	320	364	188	195	104
21	4600	540	582	280	394	1430	685	316	271	220	153	94
22	2070	523	494	280	363	3510	654	289	213	206	206	97
23	1320	503	450	280	381	8300	625	270	190	164	394	93
24	1190	483	440	280	460	2600	628	267	179	131	229	93
25	2300	478	392	300	1210	1820	2450	265	173	136	173	92
26	5480	477	441	300	1450	1470	1180	267	170	177	149	112
27	2990	473	447	300	905	1280	854	258	166	163	138	117
28	1830	474	424	300	872	1290	723	242	172	125	129	134
29	1500	574	431	280	---	2070	753	230	845	121	121	156
30	1310	675	346	260	---	1410	773	219	398	117	142	153
31	4040	---	358	260	---	1160	---	219	---	108	113	---
TOTAL	122229	25862	21586	9320	16845	67684	68843	12965	8511	4908	5912	3266
MEAN	3943	862	696	301	602	2183	2295	418	284	158	191	109
MAX	35400	3500	3550	340	1640	8300	15100	962	845	243	609	156
MIN	766	473	346	260	240	557	625	219	166	108	102	86
CFSM	4.83	1.06	.85	.37	.74	2.67	2.81	.51	.35	.19	.23	.13
IN.	5.57	1.18	.98	.42	.77	3.08	3.13	.59	.39	.22	.27	.15

CAL YR 1976 TOTAL 425603 MEAN 1163 MAX 35400 MIN 126 CFSM 1.42 IN 19.38
WTR YR 1977 TOTAL 367931 MEAN 1008 MAX 35400 MIN 86 CFSM 1.23 IN 16.75

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°23'16", long 77°22'40", Frederick County, Hydrologic Unit 02070009, at Reich's Ford Bridge, 1.1 mi (1.8 km) downstream from U.S. Highway 40, 1.2 mi (1.9 km) downstream from gaging station, 2 mi (3.2 km) southeast of Frederick, and 15.0 mi (25.1 km), upstream from mouth.

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1960 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1960 to current year.

REMARKS.--Water temperatures are measured daily in field at time of sample. Water-discharge records for Monocacy River at Jug Bridge near Frederick (station 01643000) are used for computation of sediment loads. Prior to 1970, published as Monocacy River at Jug Bridge near Frederick (station 01643000).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1961-72, 1975, 1977): Maximum daily, 31.0°C Aug. 1, 4, 1975, many days during July 1977; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,000 mg/L July 10, 1970; minimum daily mean, 1 mg/L on many days in 1961-67, 1970, and 1972.
SEDIMENT LOADS: Maximum daily, 134,000 tons (122,000 tonnes) June 22, 1972; minimum daily, less than 0.50 ton (0.45 tonne) on many days in 1961-67.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum daily, 31.0°C on many days in July; minimum daily, 0.0°C on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 684 mg/L Oct. 1; minimum daily mean, 2 mg/L Nov. 18.
SEDIMENT LOADS: Maximum daily, 43,700 tons (39,600 tonnes) Oct. 9; minimum daily, 3.2 tons (2.9 tonnes) Nov. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)
OCT											
13...	1330	1620	200	7.6	18.5	12.0	1	12	10.4	10	1.3
27...	1330	2520	195	7.6	5.0	8.0	2	20	11.4	10	2.3
NOV											
10...	1245	787	255	7.9	8.5	4.0	1	3	12.6	2	1.1
24...	1245	465	275	8.1	4.0	2.0	3	2	14.0	6	1.2
DEC											
08...	1420	2620	175	7.5	-3.5	1.0	2	80	--	24	8.6
20...	1220	507	255	8.0	10.0	3.0	2	3	13.8	3	1.2
JAN											
12...	1400	300	295	8.1	-7.0	.0	1	2	14.4	5	2.0
25...	1345	357	295	7.7	1.0	.0	1	2	13.2	6	2.2
FEB											
09...	1320	250	300	7.8	3.0	.5	1	3	15.2	7	--
23...	1300	350	270	7.8	15.0	2.5	0	3	14.8	9	1.8
MAR											
09...	1300	985	225	7.7	16.5	7.0	0	6	12.4	14	2.3
23...	1300	7890	155	7.2	9.5	4.5	0	120	12.8	27	3.8
APR											
06...	1315	6110	160	7.6	9.5	7.0	1	55	12.0	18	2.2
20...	1300	696	198	8.7	24.0	17.0	1	3	10.4	11	2.2
MAY											
04...	1240	524	216	7.9	13.5	16.5	51	5	8.5	7	2.2
18...	1215	325	234	7.7	31.0	20.5	1	4	7.5	8	2.5
JUN											
08...	1230	256	270	7.7	19.5	17.0	1	4	8.9	7	2.4
22...	1230	211	269	7.6	22.5	21.0	1	45	6.3	15	3.0
JUL											
06...	1215	141	310	7.7	34.0	27.0	1	1	5.0	15	4.0
20...	1245	202	283	7.9	31.5	27.5	2	2	4.7	20	4.2
AUG											
03...	1315	107	333	8.1	29.0	25.0	1	1	5.8	15	7.0
17...	1245	165	292	7.7	24.5	25.5	65	7	--	20	5.0
31...	1315	134	306	7.5	32.0	26.5	0	45	4.3	20	4.6
SEP											
14...	1315	87	360	7.7	23.0	20.5	3	25	5.2	30	3.3
28...	1300	165	351	7.8	19.5	18.5	2	20	6.1	20	5.8

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	STREP-TOCOCCI (COL-ONIES PER 100 ML)	FECAL COLI-FORM .7UM-MF (COL./100 ML)	FECAL STREP-TOCOCCI KF AGAR (COL. PER 100 ML)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	TOTAL CAL-CIUM (CA) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)
OCT										
13...	56	110	--	77	25	22	23	5.0	4.8	4.3
27...	--	5000	6300	75	27	20	21	4.9	5.4	4.5
NOV										
10...	--	81	84	93	30	27	28	5.6	5.6	5.9
24...	--	<1	1700	100	33	29	31	5.7	6.2	6.3
DEC										
08...	--	5900	835000	58	21	17	17	5.1	3.8	3.9
20...	--	<1	870	96	32	29	29	6.1	5.8	5.7
JAN										
12...	--	<1	85	110	35	33	33	13	6.4	8.9
25...	--	<1	200	110	35	27	34	5.7	6.5	7.6
FEB										
09...	--	360	440	110	37	32	35	6.1	6.6	7.5
23...	--	<1	32	94	33	27	28	5.8	5.8	7.4
MAR										
09...	--	89	140	75	30	19	21	5.0	5.4	6.1
23...	--	86700	812000	52	25	14	15	5.2	3.6	4.6
APR										
06...	--	6000	62000	50	16	16	14	4.4	3.6	3.6
20...	--	88	160	86	22	23	26	4.9	5.1	5.5
MAY										
04...	--	520	180	93	25	29	28	5.3	5.6	5.4
18...	--	230	130	110	29	31	32	6.0	6.3	6.4
JUN										
08...	--	31	77	120	34	34	36	6.1	6.3	7.8
22...	--	1300	560	110	35	30	35	6.3	6.1	7.8
JUL										
06...	--	530	190	140	29	39	43	6.9	6.9	10
20...	--	970	3900	120	29	35	37	6.4	6.5	8.7
AUG										
03...	--	260	2300	140	30	40	43	6.9	7.0	12
17...	--	3900	1000	120	17	35	36	6.6	6.2	10
31...	--	1400	510	120	25	33	37	5.7	5.6	10
SEP										
14...	--	130	320	140	30	42	43	7.2	7.2	15
28...	--	270	770	140	35	50	45	28	7.0	14

DATE	DIS-SOLVED SODIUM (NA) (MG/L)	TOTAL PO-TAS-SIUM (K) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRATE (N) (MG/L)
OCT										
13...	4.3	2.3	2.4	64	53	18	8.7	119	27	2.1
27...	4.2	2.8	3.0	58	48	19	7.1	108	42	1.5
NOV										
10...	5.8	2.0	2.2	77	63	18	9.6	83	7	2.3
24...	5.8	1.8	1.8	85	70	18	10	147	2	1.7
DEC										
08...	4.3	3.7	3.7	45	37	17	8.9	107	194	1.4
20...	6.1	2.0	1.9	78	64	20	9.9	145	3	2.5
JAN										
12...	9.1	2.0	2.0	90	74	18	15	148	2	3.2
25...	7.9	1.7	2.2	93	76	16	14	157	4	3.1
FEB										
09...	8.7	1.9	2.2	94	77	16	14	138	1	3.0
23...	7.4	2.1	2.4	74	61	19	13	138	2	2.7
MAR										
09...	6.6	2.0	2.3	54	44	21	11	142	20	2.4
23...	4.5	2.6	2.5	33	27	16	6.5	119	365	1.4
APR										
06...	4.0	2.3	2.3	41	34	15	6.5	93	94	1.7
20...	5.6	1.8	1.9	78	64	14	9.6	135	3	1.7
MAY										
04...	5.9	1.8	2.0	83	68	16	10	142	10	1.6
18...	6.6	2.1	2.4	94	77	15	16	138	11	1.9
JUN										
08...	8.4	2.7	2.9	100	82	14	23	156	22	2.4
22...	8.2	4.0	4.5	95	78	20	14	170	71	3.1
JUL										
06...	11	3.8	4.0	130	110	16	18	221	15	2.4
20...	9.2	4.1	4.6	110	90	15	16	178	11	1.8
AUG										
03...	14	3.7	4.1	130	110	19	23	232	16	1.2
17...	11	4.7	5.0	120	98	18	18	219	49	1.6
31...	12	5.1	5.8	110	90	19	21	184	45	1.9
SEP										
14...	16	4.4	4.6	130	110	22	26	225	62	2.0
28...	14	4.3	4.5	130	110	22	23	204	14	2.2

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT										
13...	.02	.05	.25	.18	140	1	0	<10	0	330
27...	.02	.06	.72	.17	1300	1	0	10	2	940
NOV										
10...	.01	.08	.28	.12	80	0	0	10	1	140
24...	.01	.09	.14	.12	90	1	0	10	2	140
DEC										
08...	.02	.20	1.7	.38	4100	2	0	10	9	5300
20...	.01	.16	.24	.13	70	1	1	10	5	140
JAN										
12...	.02	.25	.22	.23	240	0	0	<10	5	70
25...	.02	.33	.20	.20	40	1	0	<10	4	90
FEB										
09...	.03	.31	.39	.24	70	0	1	<10	3	100
23...	.02	.20	.42	.19	100	1	0	20	4	170
MAR										
09...	.02	.14	.45	.13	210	0	0	30	0	350
23...	.03	.12	1.4	.30	6300	3	0	20	9	9500
APR										
06...	.02	.08	1.1	.21	1500	1	0	10	7	4200
20...	.01	.09	.37	.10	280	1	0	10	3	260
MAY										
04...	.03	.14	.33	.13	160	0	0	<10	3	230
18...	.06	.14	.49	.17	170	1	0	10	3	280
JUN										
08...	.07	.19	.26	.28	220	0	0	10	4	230
22...	.14	.23	.74	.39	30	1	0	10	15	2400
JUL										
06...	.13	.28	.92	.43	570	4	0	10	7	1000
20...	.12	.30	.80	.42	750	2	0	20	5	1100
AUG										
03...	.12	.54	.86	.52	670	1	0	<10	8	1000
17...	.09	.29	.81	.63	1000	0	0	10	8	1700
31...	.15	.43	.87	.77	1000	0	0	10	8	1500
SEP										
14...	.16	.71	.69	.67	490	1	0	<10	7	900
28...	.11	.48	.92	.59	670	1	0	<10	6	1100

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	OIL AND GREASE (MG/L)	CHLORO-PHYLL A (UG/L)	CHLORO-PHYLL B (UG/L)
OCT										
13...	50	12	50	30	0	10	4.6	0	6.49	5.97
27...	80	14	70	20	0	0	9.2	0	.000	.000
NOV										
10...	50	4	30	20	0	0	11	0	1.90	.000
24...	30	10	20	30	0	20	2.3	0	3.71	.000
DEC										
08...	70	15	210	30	0	80	5.0	0	.000	.000
20...	50	6	20	20	0	20	3.1	0	3.35	1.82
JAN										
12...	40	3	30	30	0	40	3.2	0	2.17	.000
25...	20	7	10	10	0	10	1.4	0	1.66	.000
FEB										
09...	30	10	50	40	0	0	5.8	0	--	--
23...	30	4	30	30	0	10	5.6	1	--	--
MAR										
09...	60	8	40	30	0	0	3.2	--	--	--
23...	60	16	300	20	0	40	11	2	--	--
APR										
06...	30	8	180	30	0	50	--	1	--	--
20...	40	6	30	10	0	0	6.9	1	--	--
MAY										
04...	60	8	30	20	0	10	5.6	0	--	--
18...	40	13	50	30	0	10	5.8	2	--	--
JUN										
08...	20	8	60	40	0	40	7.3	2	1.14	.000
22...	40	20	110	50	0	10	8.1	0	2.93	.000
JUL										
06...	30	5	120	70	0	10	5.3	0	9.86	2.26
20...	50	11	170	100	0	20	8.1	0	4.33	.079
AUG										
03...	40	14	170	90	0	0	4.7	0	7.64	.458
17...	40	36	170	80	0	10	6.2	0	1.02	.000
31...	20	19	170	90	0	10	7.1	0	24.9	4.78
SEP										
14...	30	15	180	130	0	10	7.9	13	4.58	.193
28...	40	4	170	110	0	20	10	0	4.04	.479

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM
APR												
05...	1745	19520	1168	61600	42	56	71	79	97	97	99	100

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	8.0	2.5	---	---	6.0	16.0	18.0	---	---	26.0	---
2	14.0	8.0	3.0	---	---	5.5	---	19.0	---	---	28.0	27.5
3	15.0	8.0	2.0	---	---	6.5	13.0	19.0	---	---	25.0	28.0
4	---	9.0	0.0	---	---	6.0	10.0	---	---	29.0	27.0	27.5
5	---	8.0	3.0	---	---	6.0	8.0	20.5	---	28.0	28.0	---
6	17.0	8.0	3.0	---	---	7.0	9.0	20.0	---	29.0	---	---
7	---	8.0	2.0	---	---	10.0	---	20.0	---	31.0	28.0	25.0
8	18.0	6.0	2.0	---	---	10.0	---	20.0	20.0	31.0	27.0	22.5
9	---	5.0	---	---	0.5	9.0	10.0	15.0	20.0	28.0	21.0	21.5
10	15.0	7.0	3.0	---	---	8.0	11.0	15.5	20.0	---	26.0	22.0
11	13.0	7.0	3.0	---	6.0	12.0	16.0	17.0	22.0	31.0	---	---
12	12.0	6.0	5.0	0.0	4.0	12.0	18.0	19.0	24.0	26.0	28.0	20.5
13	14.0	6.0	---	---	4.0	13.0	20.0	20.5	24.0	23.5	26.0	21.0
14	13.0	7.0	3.0	---	4.0	12.0	18.0	23.0	20.0	31.0	25.0	23.0
15	14.0	7.0	5.0	---	3.0	10.0	18.0	22.0	23.0	---	26.0	19.0
16	---	6.0	5.0	---	4.0	12.0	---	23.0	25.0	31.0	27.0	---
17	12.0	6.0	---	---	2.0	10.0	18.0	24.5	26.0	31.0	24.0	---
18	11.0	6.5	4.0	---	2.0	8.0	14.5	---	26.0	31.0	23.0	25.0
19	10.5	8.0	4.0	---	2.0	---	20.5	24.5	25.0	---	25.0	25.0
20	11.0	6.0	6.0	---	---	---	18.0	25.0	23.0	31.0	24.0	22.0
21	10.0	6.0	1.0	---	2.0	9.0	19.5	25.0	23.0	30.0	---	22.0
22	10.0	5.0	0.5	---	4.0	8.0	22.0	24.0	25.0	29.0	26.0	22.0
23	---	5.0	2.0	---	6.0	7.0	24.0	24.0	25.0	---	23.0	22.0
24	10.0	4.0	---	---	4.0	7.0	19.0	24.0	---	---	23.0	24.0
25	10.0	5.0	4.0	0.0	4.0	8.0	16.0	24.0	---	24.0	24.0	---
26	10.0	5.5	4.0	---	5.0	10.0	16.0	25.0	26.0	23.0	23.0	20.0
27	6.0	---	2.0	---	6.0	10.5	17.0	---	---	23.0	23.0	---
28	7.5	8.5	2.0	---	6.0	10.0	---	27.0	25.0	24.0	26.0	19.5
29	8.0	5.0	2.0	---	---	14.0	---	---	26.0	---	29.0	18.5
30	8.0	3.0	---	---	---	17.5	18.0	20.0	---	27.0	26.0	18.5
31	---	---	---	---	---	15.0	---	20.0	---	27.0	27.5	---

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	684	6070	41	428	12	17	5	4.3	5	3.5	21	46
2	328	3550	20	98	15	19	5	4.6	5	3.5	14	24
3	319	4810	13	53	19	19	5	4.6	5	3.2	11	17
4	184	1710	15	56	11	12	5	4.6	5	3.8	80	736
5	123	475	11	37	14	15	5	4.6	5	4.1	322	6570
6	62	164	13	39	10	11	6	5.2	10	7.6	131	836
7	32	69	10	27	221	1780	6	5.5	10	7.0	78	324
8	54	318	14	35	290	3220	6	5.2	7	4.5	36	119
9	618	43700	8	18	67	212	6	5.2	6	3.9	25	70
10	285	30200	15	33	25	63	6	5.5	5	3.3	21	52
11	72	959	8	17	25	57	6	5.5	12	15	25	56
12	38	240	11	22	22	49	10	8.1	97	315	27	55
13	25	115	13	25	17	38	6	4.2	58	252	483	8380
14	27	103	5	9.0	15	28	6	4.9	36	138	486	11800
15	18	57	11	19	12	18	5	4.1	[illegible]	65	216	1590
16	12	33	6	10	15	25	5	4.1	28	52	87	430
17	14	35	4	6.5	18	29	5	3.8	19	27	60	228
18	9	21	2	3.2	20	31	5	3.5	13	16	38	129
19	6	12	3	4.7	13	19	5	3.5	11	13	76	316
20	36	159	15	23	14	20	5	3.8	10	11	95	305
21	155	1990	15	22	15	24	5	3.8	9	9.6	40	154
22	44	265	14	20	15	20	5	3.8	8	7.8	334	4640
23	20	71	7	9.5	18	22	5	3.8	9	9.3	584	15800
24	9	29	16	21	17	20	5	3.8	24	30	135	948
25	48	303	9	12	14	15	5	4.1	97	387	52	256
26	124	2030	11	14	16	19	5	4.1	156	619	25	99
27	78	690	7	8.9	12	14	5	4.1	56	138	22	76
28	14	69	3	3.8	7	8.0	5	4.1	30	71	29	101
29	8	32	14	22	5	5.8	6	4.5	---	---	80	447
30	4	14	14	26	5	4.7	6	4.2	---	---	38	145
31	68	915	---	---	5	4.8	5	3.5	---	---	31	97
TOTAL	---	99208	---	1122.6	---	5839.3	---	138.6	---	2220.1	---	54846
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	29	77	17	29	26	16	108	71	55	17	80	24
2	176	2690	17	27	22	15	92	47	61	18	95	34
3	371	9370	16	24	26	23	76	33	52	15	70	24
4	95	767	16	24	22	14	60	24	50	14	65	19
5	663	27500	20	32	22	12	43	17	105	29	68	19
6	184	5780	57	148	22	13	65	24	90	27	58	16
7	54	494	52	115	28	18	74	27	50	14	50	13
8	32	230	34	59	36	24	58	22	50	14	58	24
9	22	124	29	42	37	30	50	23	45	13	55	23
10	24	112	22	29	27	27	50	21	50	16	45	13
11	22	90	19	24	31	27	52	22	95	68	45	12
12	23	84	24	28	30	22	58	26	85	53	65	16
13	21	69	27	30	24	15	108	48	65	32	60	15
14	20	59	28	30	29	17	83	32	72	36	50	12
15	20	53	24	24	34	20	55	23	77	37	82	19
16	18	45	22	21	30	17	40	15	88	41	92	21
17	16	37	30	28	20	12	32	11	335	1050	90	22
18	14	31	37	34	103	218	46	18	243	412	86	21
19	17	35	40	35	310	376	58	36	126	110	60	15
20	20	39	21	18	198	205	50	25	100	53	113	32
21	18	33	26	22	115	84	46	27	85	35	90	23
22	14	25	23	18	97	56	61	34	84	47	78	20
23	14	24	19	14	94	48	56	25	150	160	70	18
24	10	17	24	17	90	43	49	17	112	69	70	18
25	367	2780	24	17	93	43	51	19	118	55	70	17
26	162	562	24	17	96	44	105	50	120	48	80	24
27	42	97	22	15	86	39	100	44	105	39	65	21
28	30	59	16	10	70	33	68	23	94	33	65	24
29	26	53	17	11	416	1010	60	20	70	23	80	34
30	21	44	19	11	228	268	62	20	100	38	80	33
31	---	---	33	20	---	---	57	17	112	34	---	---
TOTAL	---	51380	---	973	---	2789	---	861	---	2650	---	626

TOTAL LOAD FOR YEAR: 222653.6 TONS.

01643500 BENNETT CREEK AT PARK MILLS, MD

LOCATION.--Lat 39°17'40", long 77°24'30", Frederick County, Hydrologic Unit 02070009, on left bank 75 ft (23 m) downstream from highway bridge, 0.2 mi (0.3 km) south of Park Mills, 1.8 mi (2.9 km) upstream from mouth, and 3.7 mi (6.0 km) southwest of Urbana.

DRAINAGE AREA.--62.8 mi^2 (162.7 km^2).

PERIOD OF RECORD.--July 1948 to September 1958. Annual maximum, water years 1960-66. August 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 240 ft (73.2 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, Nov. 18 to Jan. 5, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1949-58, 1967-77), 62.2 ft^3/s (1.762 m^3/s), 14.96 in/yr (380 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft^3/s (912 m^3/s) June 21, 1972, gage height, 22.1 ft (6.74 m), from floodmark, from rating curve extended above 2,700 ft^3/s (76.5 m^3/s) on basis of contracted-opening measurements at gage heights 11.15 ft (3.399 m), 14.33 ft (4.368 m), and 22.1 ft (6.74 m); minimum, 0.30 ft^3/s (0.008 m^3/s) Sept. 8, 1966, gage height, 0.80 ft (0.244 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1400	*2580	73.1	7.37	2.246	Apr. 5	0200	1590	45.0	5.58	1.701

Minimum discharge, 5.6 ft^3/s (0.16 m^3/s) Sept. 14, 15, gage height, 1.40 ft (0.427 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	98	42	34	28	44	56	46	27	21	13	9.3
2	171	81	40	36	28	42	245	44	32	20	13	8.3
3	254	74	40	36	29	40	127	44	25	18	12	8.1
4	89	69	40	34	33	66	197	46	23	17	12	8.1
5	63	63	40	32	34	78	767	55	23	17	11	7.7
6	52	59	40	31	26	59	230	90	34	17	15	7.9
7	47	57	250	34	26	53	180	87	31	17	17	8.1
8	142	53	120	30	26	49	140	55	25	17	13	7.7
9	1140	51	75	32	26	46	120	45	51	21	26	7.8
10	231	51	55	35	56	45	100	43	44	21	14	9.7
11	125	49	55	30	132	43	90	41	30	18	29	7.6
12	97	48	60	28	138	42	85	39	27	20	15	6.5
13	90	47	55	31	119	211	110	38	26	23	15	6.5
14	80	46	48	37	82	159	95	37	25	17	21	6.1
15	71	46	48	40	64	94	85	35	27	15	19	6.2
16	66	45	48	39	52	81	75	34	25	14	14	7.6
17	64	44	48	33	42	68	65	33	29	32	33	9.3
18	62	44	46	35	39	69	60	33	135	62	29	8.2
19	58	42	44	34	43	64	55	38	48	21	15	7.1
20	196	42	46	34	44	64	55	33	103	27	13	11
21	167	42	44	34	40	67	55	31	55	21	12	8.5
22	81	40	38	34	37	340	50	29	34	18	12	7.9
23	67	40	42	34	41	195	50	29	30	15	12	7.9
24	83	40	38	35	51	120	50	29	27	14	12	8.0
25	107	40	40	37	71	95	60	30	27	18	14	8.6
26	168	40	42	37	53	85	55	30	27	30	11	9.8
27	87	40	40	36	50	75	50	27	24	16	10	9.9
28	74	40	40	33	49	80	46	27	27	14	9.9	11
29	67	65	38	30	---	85	50	26	32	14	9.1	8.7
30	63	50	38	28	---	75	48	25	23	17	9.3	7.7
31	233	---	36	27	---	65	---	27	---	15	10	---
TOTAL	4417	1546	1676	1040	1459	2699	3451	1226	1096	627	470.3	246.8
MEAN	142	51.5	54.1	33.5	52.1	87.1	115	39.5	36.5	20.2	15.2	8.23
MAX	1140	98	250	40	138	340	767	90	135	62	33	11
MIN	47	40	36	27	26	40	46	25	23	14	9.1	6.1
CFSM	2.26	.82	.86	.53	.83	1.39	1.83	.63	.58	.32	.24	.13
IN.	2.62	.92	.99	.62	.86	1.60	2.04	.73	.65	.37	.28	.15

CAL YR 1976 TOTAL 28745.0 MEAN 78.5 MAX 1270 MIN 12 CFSM 1.25 IN 17.03
WTR YR 1977 TOTAL 19954.1 MEAN 54.7 MAX 1140 MIN 6.1 CFSM .87 IN 11.82

01645000 SENECA CREEK AT DAWSONVILLE, MD

LOCATION.--Lat 39°07'41", long 77°20'13", Montgomery County, Hydrologic Unit 02070008, on right bank 60 ft (18 m) downstream from bridge on State Highway 28, 150 ft (46 m) downstream from mouth of Great Seneca Creek, 0.5 mi (0.8 km) east of Dawsonville, and 5.8 mi (9.3 km) upstream from mouth.
DRAINAGE AREA.--101 mi² (262 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1930 to current year.
REVISED RECORDS.--WSP 726: Drainage area. WSP 1232: 1930. WSP 1272: 1933. WSP 1432: 1934-35(M), 1941(M). WDR MD-DE-74-1: 1970(M).
GAGE.--Water-stage recorder. Concrete control since Mar. 3, 1934. Datum of gage is 214.15 ft (65.273 m) above mean sea level, adjustment of 1912. Sept. 26 to Nov. 9, 1930, chain gage and Nov. 10, 1930, to Apr. 6, 1934, water-stage recorder, at highway bridge 60 ft (18 m) upstream at same datum.
REMARKS.--Water-discharge records good. Small diversion at times for irrigation above station.
AVERAGE DISCHARGE.--47 years, 98.4 ft³/s (2.789 m³/s), 13.23 in/yr (336 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s (739 m³/s) June 22, 1972, gage height, 16.4 ft (5.00 m), from high-water mark in gage house, from rating curve extended above 3,000 ft³/s (850 m³/s) on basis of contracted-opening and flow-over-road measurement at gage height 12.17 ft (3.709 m) at gage; and contracted-opening and flow-over-road measurement at gage height 16.32 ft (4.974 m) at site 5.0 mi (8.0 km) downstream, adjusted for flow from intervening area; minimum observed, 1.7 ft³/s (0.048 m³/s) Sept. 28, 29, 1930, gage height, 0.56 ft (0.171 m).
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1230	*3770	107	8.42	2.566	Apr. 5	0400	1970	55.8	6.88	2.097
Mar. 22	1645	1480	41.9	6.01	1.832						

Minimum discharge, 12 ft³/s (0.34 m³/s) Sept. 13, 14, 15, 16, gage height, 1.71 ft (0.521 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	156	72	55	55	76	86	63	40	30	20	19
2	178	126	73	60	55	71	369	61	39	29	20	17
3	422	118	70	64	55	67	220	63	34	27	18	19
4	121	112	70	66	59	96	257	63	33	26	19	17
5	79	104	70	64	59	115	1100	73	33	24	18	16
6	67	97	70	62	49	91	351	91	43	24	17	17
7	61	95	404	67	50	83	228	134	45	24	18	16
8	155	92	169	60	50	75	187	79	36	24	23	16
9	1780	87	110	64	50	71	156	65	67	25	61	15
10	477	95	99	70	97	69	140	63	63	29	48	17
11	140	92	98	58	277	67	128	61	43	30	122	15
12	111	91	102	58	318	69	125	59	39	150	131	12
13	98	87	93	55	220	368	143	55	37	93	30	12
14	89	85	81	61	125	342	120	53	37	33	48	12
15	79	84	82	69	96	155	96	52	37	27	40	12
16	75	80	84	65	78	125	91	48	37	24	26	13
17	75	78	83	56	66	105	86	48	59	23	25	16
18	77	79	78	61	62	106	84	46	159	140	32	15
19	69	77	75	63	67	102	82	48	73	32	24	13
20	312	75	79	68	65	105	77	46	69	46	22	21
21	331	74	82	60	61	113	75	45	86	33	21	17
22	134	74	65	60	59	603	75	43	40	27	43	13
23	114	71	73	60	64	289	73	42	36	23	25	13
24	131	70	65	60	106	166	73	40	32	21	26	13
25	197	71	70	65	144	134	77	46	33	22	33	13
26	279	70	73	60	93	120	75	48	34	37	23	14
27	141	73	71	59	88	109	69	40	30	22	21	15
28	118	72	69	57	87	121	67	37	46	20	20	15
29	108	115	67	55	---	117	73	36	79	19	19	13
30	104	87	65	53	---	103	65	34	34	29	23	12
31	338	---	63	54	---	96	---	37	---	23	23	---
TOTAL	6576	2687	2825	1889	2655	4329	4848	1719	1473	1136	1039	448
MEAN	212	89.6	91.1	60.9	94.8	140	162	55.5	49.1	36.6	33.5	14.9
MAX	1780	156	404	70	318	603	1100	134	159	150	131	21
MIN	61	70	63	53	49	67	65	34	30	19	17	12
CFSM	2.10	.89	.90	.60	.94	1.39	1.60	.55	.49	.36	.33	.15
IN.	2.42	.99	1.04	.70	.98	1.59	1.79	.63	.54	.42	.38	.17

CAL YR 1976 TOTAL 47294 MEAN 129 MAX 2980 MIN 25 CFSM 1.28 IN 17.42
WTR YR 1977 TOTAL 31624 MEAN 86.6 MAX 1780 MIN 12 CFSM .86 IN 11.65

01645000 SENECA CREEK AT DAWSONVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (CA.MG) (MG/L)
OCT 18...	1340	71	130	7.6	8.0	9.5	0	--	--
NOV 29...	1425	133	135	8.1	1.5	6.0	3	--	--
DEC 29...	1445	65	--	--	.0	.5	--	--	--
FEB 17...	1155	46	140	7.3	-3.5	.0	0	--	--
MAR 21...	1415	93	140	7.6	--	8.0	--	10	39
23...	1500	157	--	--	6.5	8.0	--	--	--
MAY 17...	1220	48	--	--	20.5	16.0	--	--	--
JUN 16...	1445	35	130	7.9	25.5	20.5	0	10	39
AUG 16...	1230	26	--	--	28.0	25.0	--	--	--

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT 18...	--	--	--	--	--	--	--	--	--
NOV 29...	--	--	--	--	--	--	--	--	--
DEC 29...	--	--	--	--	--	--	--	--	--
FEB 17...	--	--	--	--	--	--	--	--	--
MAR 21...	20	9.8	3.6	6.6	1.9	23	7.9	12	.0
23...	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--
JUN 16...	12	10	3.5	5.4	1.9	33	3.6	8.9	.1
AUG 16...	--	--	--	--	--	--	--	--	--

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT 18...	--	--	--	--	--	--	--	--	--
NOV 29...	--	--	--	--	--	--	--	--	--
DEC 29...	--	--	--	--	--	--	--	--	--
FEB 17...	--	--	--	--	--	--	--	--	--
MAR 21...	9.1	83	62	1.8	.04	800	40	100	60
23...	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--
JUN 16...	9.9	81	60	1.7	.06	1300	190	110	60
AUG 16...	--	--	--	--	--	--	--	--	--

01645200 WATTS BRANCH AT ROCKVILLE, MD

LOCATION.--Lat 39°05'03", long 77°10'38", Montgomery County, Hydrologic Unit 02070008, on left bank 0.2 mi 0.3 km) south of State Highway 28, 1.3 mi (2.1 km) west of post office in Rockville, and 9.4 mi (15.0 km) upstream from mouth.

DRAINAGE AREA.--3.70 mi² (9.58 km²).

PERIOD OF RECORD.--June 1957 to current year.

REVISED RECORDS.--WSP 2103: 1965. WDR MD-DE-75-1: 1967-70.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 330 ft (100 m), from topographic map.

REMARKS.--Records good except those for period of indefinite stage-discharge relationship, Apr. 15 to July 19, which are fair. Some regulation of low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 3.91 ft³/s (0.111 m³/s), 14.35 in/yr (364 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) Sept. 26, 1975, gage height, 7.32 ft (2.231 m), from rating curve extended above 280 ft³/s (7.93 m³/s) on basis of combined computation of peak flow through culvert and slope-area measurement of tributary inflow at gage height 7.22 ft (2.201 m) in gage well, 7.83 ft (2.387 m), from floodmarks; minimum, 0.10 ft³/s (0.003 m³/s) Sept. 2, 1966, gage height, 1.10 ft (0.335 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft³/s (6.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 13	1745	*259	7.33	5.76	1.700	July 12	1745	225	6.37	5.46	1.664

Minimum discharge, 0.07 ft³/s (0.002 m³/s) Sept. 12, 13, 30, gage height, 1.10 ft (0.335 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	2.9	1.6	1.4	1.4	2.0	1.9	1.4	1.3	.45	3.6	.38
2	20	2.5	1.7	1.4	1.4	1.9	18	1.4	.73	.37	.56	.25
3	13	2.5	1.5	1.4	1.3	1.8	3.5	1.4	.61	.32	.28	.22
4	2.3	2.4	1.5	1.4	1.5	3.4	21	2.7	.52	.30	.26	.29
5	1.5	2.1	1.5	1.4	1.3	2.6	31	2.1	.69	.26	1.3	.13
6	1.5	2.1	1.8	1.5	3.1	2.0	6.3	4.3	6.4	.25	.43	.59
7	1.3	2.0	23	1.5	1.3	1.8	4.0	2.2	.87	.36	1.6	.26
8	4.1	1.9	3.1	1.6	1.4	1.7	3.3	1.6	.75	.25	4.9	.19
9	39	1.9	2.2	1.5	2.2	1.6	3.0	1.3	7.0	.59	1.1	.37
10	3.4	1.9	2.1	2.0	9.2	1.6	2.8	1.3	.94	.30	1.3	.49
11	2.3	1.9	2.7	1.5	5.2	1.6	2.6	1.3	.73	1.7	.37	.20
12	1.9	1.9	2.8	1.8	3.6	1.5	2.5	1.3	.66	15	1.1	.11
13	1.7	1.8	2.2	1.6	3.1	43	2.4	1.3	.77	1.2	.27	1.2
14	1.5	1.8	1.8	1.5	2.0	5.8	2.2	1.2	.60	.69	10	.56
15	1.5	1.7	1.9	3.0	1.8	3.0	2.1	1.1	.81	1.1	.60	.14
16	1.5	1.7	2.0	1.5	1.5	2.4	2.1	1.1	.64	.34	.32	.61
17	2.6	1.6	1.9	1.4	1.4	2.0	2.0	1.4	7.2	14	.84	.26
18	1.5	1.7	1.7	1.4	1.4	4.9	1.9	1.1	3.9	2.4	.34	.28
19	1.3	1.7	1.7	1.5	1.4	2.1	1.9	1.2	.98	.52	.23	.21
20	26	1.6	3.3	1.5	1.4	5.2	1.9	1.0	1.3	4.0	.22	.39
21	4.0	1.6	2.2	1.3	1.3	2.3	1.8	.92	1.2	.51	.20	.40
22	2.2	1.7	1.6	1.3	1.3	28	3.0	.89	.62	.37	.19	.55
23	1.9	1.5	1.7	1.3	1.4	4.1	3.9	.97	.52	.46	.29	.21
24	6.7	1.5	1.5	1.4	7.6	2.9	4.9	.89	.54	.35	7.3	.15
25	9.6	1.5	1.5	2.0	3.3	2.5	2.0	3.7	.64	3.1	.56	.16
26	10	1.5	2.7	1.5	2.4	2.3	1.8	1.1	.53	.95	.24	.48
27	2.8	2.3	1.7	1.4	2.4	2.2	1.7	1.3	.46	.51	.21	.97
28	2.4	1.8	1.7	1.7	2.3	4.5	2.5	.90	6.9	.30	.19	1.1
29	2.2	8.1	1.7	3.8	---	2.4	1.9	.82	1.7	.26	.19	.40
30	4.9	1.8	1.4	1.5	---	2.1	1.4	.79	.49	2.4	.87	.12
31	14	---	1.4	1.5	---	2.1	---	.83	---	.29	.25	---
TOTAL	193.4	62.9	81.1	50.5	68.9	147.3	141.3	44.81	51.00	53.90	40.11	11.67
MEAN	6.24	2.10	2.62	1.63	2.46	4.75	4.71	1.45	1.70	1.74	1.29	.39
MAX	39	8.1	23	3.8	9.2	43	31	4.3	7.2	15	10	1.2
MIN	1.3	1.5	1.4	1.3	1.3	1.5	1.4	.79	.46	.25	.19	.11
CFSM	1.69	.57	.71	.44	.67	1.28	1.27	.39	.46	.47	.35	.11
IN.	1.94	.63	.82	.51	.69	1.48	1.42	.45	.51	.54	.40	.12

CAL YR 1976 TOTAL 1330.49 MEAN 3.64 MAX 54 MIN .40 CFSM .98 IN 13.38
WTR YR 1977 TOTAL 946.89 MEAN 2.59 MAX 43 MIN .11 CFSM .70 IN 9.52

01645500 POTOMAC RIVER AT GREAT FALLS, MD
(National stream-quality accounting network station)

LOCATION.--Lat 39°00'03", long 77°14'56", Montgomery County, Hydrologic Unit 02070008, on left bank in the intake building for the Washington Aqueduct at the diversion dam at Great Falls, and at river mile 126.1 (202.9 km).

DRAINAGE AREA.--11,430 mi^2 (29,600 km^2).

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1973 to current year.
WATER TEMPERATURES: March 1973 to current year.
INSTRUMENTATION.--Water-quality monitor since March 1973

REMARKS.--Records of discharge are given for station 01646500 Potomac River near Washington, D. C. (unadjusted for diversions). Interruptions in record were due to malfunctions of the instruments. Some periods of missing temperature records were supplied by the Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (March 1974 to current year): Maximum, 556 micromhos Sept. 30, 1977; minimum, 75 micromhos Jan. 1, 1976.
WATER TEMPERATURE: Maximum, 33.0°C July 20, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 556 micromhos Sept. 30; minimum, 116 micromhos Oct. 11.
WATER TEMPERATURES: Maximum, 33.0°C July 20; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	WEATHER	TURBIDITY (JTU)	FECAL COLIFORM .7UM-MF (COL./100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)
OCT												
12...	1045	80800	160	8.0	16.0	13.5	0	74	3900	5700	--	63
NOV												
09...	1000	11900	285	8.1	1.0	3.5	1	4	28	--	69	110
DEC												
07...	1015	7520	385	8.8	7.0	3.5	61	3	330	--	670	140
JAN												
11...	1115	4190	400	8.3	-5.0	.0	1	1	B4	--	57	150
FEB												
22...	1000	5450	375	8.2	2.5	1.0	2	3	B2	--	B16	130
MAR												
22...	1045	18400	210	7.6	7.5	8.5	64	15	180	--	460	75
APR												
19...	1000	10900	234	8.9	23.5	19.0	3	3	B5	--	67	120
MAY												
17...	1000	4720	310	8.2	23.5	21.5	0	5	B7	--	180	130
JUN												
07...	0950	2820	351	8.3	17.0	20.5	1	10	220	--	580	140
JUL												
05...	1015	2120	319	8.1	29.0	27.5	1	3	B9	--	2900	110
26...	1015	2580	324	8.2	24.5	25.5	0	2	B12	--	1000	120
AUG												
02...	1030	2080	360	8.2	22.5	26.0	0	1	1300	--	1800	120
09...	1000	2430	310	8.0	28.5	27.5	1	9	B11000	--	B23000	100
16...	1015	1860	369	8.2	28.5	27.5	1	15	220	--	2300	130
23...	1000	2110	387	8.0	23.5	24.5	1	4	B16	--	2400	120
30...	1015	1530	389	8.2	28.5	27.0	1	3	33	--	1200	130
SEP												
06...	1040	1470	450	8.2	29.0	28.5	0	7	B8	--	1000	150
15...	1000	1340	459	8.2	18.0	21.0	3	8	B16	--	2800	150

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT												
12...	20	19	3.8	2.1	2.8	52	43	17	3.8	.1	7.3	103
NOV												
09...	32	31	6.7	5.7	2.0	89	73	28	7.4	.2	7.1	165
DEC												
07...	44	42	9.2	13	1.9	120	98	46	12	.1	.7	193
JAN												
11...	42	43	9.6	16	1.9	128	110	50	24	.1	2.0	211
FEB												
22...	52	38	8.1	15	2.3	93	76	50	17	.1	1.4	191
MAR												
22...	33	22	4.8	6.4	1.5	51	42	26	7.3	.0	6.3	133
APR												
19...	41	34	7.3	7.3	1.9	90	74	32	8.7	.1	2.9	162
MAY												
17...	49	37	9.4	14	2.4	100	82	50	15	.1	.4	217
JUN												
07...	46	38	10	19	2.8	110	90	54	21	.1	3.4	213
JUL												
05...	49	27	9.9	22	3.3	72	59	62	20	.2	.1	196
26...	46	32	10	19	3.1	92	75	58	22	.1	.3	217
AUG												
02...	52	34	9.4	24	3.2	87	71	65	24	.1	1.5	229
09...	38	28	7.7	22	3.5	78	64	55	19	.1	2.6	176
16...	44	35	9.4	29	3.6	100	82	67	22	.1	2.9	218
23...	54	32	10	31	3.7	82	67	75	29	.2	.1	241
30...	53	34	10	30	3.5	89	73	70	29	.1	.4	241
SEP												
06...	66	39	12	39	3.8	98	80	89	37	.2	.2	286
15...	65	39	12	37	3.5	100	82	95	32	.2	.2	313

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT												
12...	82	--	.93	1.3	.29	--	--	--	--	--	--	--
NOV												
09...	132	--	1.2	.33	.04	--	--	--	--	--	--	--
DEC												
07...	184	--	1.4	.82	.06	0	1	0	2	10	0	0
JAN												
11...	210	--	1.6	.13	.03	--	--	--	--	--	--	--
FEB												
22...	178	--	1.2	.33	.01	--	--	--	--	--	--	--
MAR												
22...	99	35	1.0	.64	.07	0	0	0	2	20	0	0
APR												
19...	139	--	.77	.46	.05	--	--	--	--	--	--	--
MAY												
17...	178	--	.34	.70	.06	--	--	--	--	--	--	--
JUN												
07...	203	--	.19	.82	.09	2	2	0	0	20	3	0
JUL												
05...	180	--	.02	1.3	.09	--	--	--	--	--	--	--
26...	190	--	.06	.62	.07	0	1	0	0	<10	2	0
AUG												
02...	204	--	.13	1.1	.08	0	1	0	0	<10	1	0
09...	176	--	.26	.99	.17	1	1	0	0	<10	2	0
16...	218	--	.13	.98	.06	1	1	0	0	10	0	0
23...	221	8	.02	1.3	.08	1	1	0	0	10	0	0
30...	221	--	.04	.54	.08	0	0	0	0	<10	1	0
SEP												
06...	269	--	.06	.74	.07	0	0	30	2	<10	2	3
15...	268	--	.01	.73	.08	0	1	0	0	<10	6	0

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
09...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
07...	0	6	0	220	10	150	16	20	30	.1	.1	--
JAN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
22...	0	4	3	1400	20	190	2	70	10	.0	.0	0
APR												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
17...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
07...	0	8	3	560	30	130	18	110	20	.0	.0	0
JUL												
05...	--	--	--	--	--	--	--	--	--	--	--	--
26...	0	7	3	470	50	36	2	120	10	.0	.0	0
AUG												
02...	0	8	3	1200	10	60	7	100	10	.0	.0	0
09...	0	11	4	4800	70	81	8	140	0	.0	.0	0
16...	0	6	3	600	10	60	23	80	0	.0	.0	0
23...	0	7	3	650	0	220	9	120	0	.0	.0	0
30...	0	5	2	390	20	480	5	100	10	--	.0	0
SEP												
06...	0	5	0	690	60	240	17	120	0	.1	.1	0
15...	0	5	0	490	20	150	6	120	0	.5	.5	0

DATE	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED URANIUM (U) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
09...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
07...	0	90	10	--	--	--	--	--	--	--	--	--
JAN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
22...	0	20	10	<1.4	2.6	2.9	2.5	2.3	2.0	.05	.09	6.0
APR												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
17...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
07...	0	50		--	--	--	--	--	--	--	--	7.0
JUL												
05...	--	--	--	--	--	--	--	--	--	--	--	--
26...	0	20	0	--	--	--	--	--	--	--	--	5.3
AUG												
02...	0	30	10	--	--	--	--	--	--	--	--	7.1
09...	0	20	10	--	--	--	--	--	--	--	--	7.2
16...	0	20	0	--	--	--	--	--	--	--	--	5.2
23...	0	20	0	<1.7	.5	4.3	.8	3.4	.7	.10	.34	--
30...	0	40	10	--	--	--	--	--	--	--	--	4.8
SEP												
06...	0	30	10	--	--	--	--	--	--	--	--	5.8
15...	0	20	10	--	--	--	--	--	--	--	--	8.4

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL PCB (UG/L)	TOTAL ALDRIN (UG/L)	TOTAL ATRA-ZINE (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)
OCT											
12...	.0	.00	--	.0	.00	.00	.00	.00	.00	.00	.00
NOV											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
DEC											
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
JAN											
11...	--	--	--	--	--	--	--	--	--	--	--
FEB											
22...	--	--	--	--	--	--	--	--	--	--	--
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
19...	--	--	--	--	--	--	--	--	--	--	--
MAY											
17...	--	--	--	--	--	--	--	--	--	--	--
JUN											
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
02...	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
15...	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)	POLY-CHLO-RINATED NAPH-THA-LENES (UG/L)	TOTAL PARA-THION (UG/L)	TOTAL TOX-APHENE (UG/L)	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)
OCT										
12...	.00	.00	.00	.00	.00	.00	.00	.00	0	--
NOV										
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
DEC										
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
JAN										
11...	--	--	--	--	--	--	--	--	--	--
FEB										
22...	--	--	--	--	--	--	--	--	--	--
MAR										
22...	--	--	--	--	--	--	--	--	--	--
APR										
19...	--	--	--	--	--	--	--	--	--	--
MAY										
17...	--	--	--	--	--	--	--	--	--	--
JUN										
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
JUL										
05...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
AUG										
02...	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP										
06...	ND	ND	ND	ND	ND	ND	--	ND	ND	ND
15...	--	--	--	--	--	--	--	--	--	--

ND NOT DETECTED

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT										
12...	.00	.00	.00	.00	3400	--	--	305	66500	97
NOV										
09...	--	--	--	--	19000	--	--	--	--	--
09...	--	--	--	--	--	4.35	11.4	--	--	--
DEC										
07...	--	--	--	--	1100	--	--	10	203	67
07...	--	--	--	--	--	14.8	16.9	--	--	--
JAN										
11...	--	--	--	--	950	--	--	--	--	--
FEB										
22...	--	--	--	--	970	--	--	--	--	--
MAR										
22...	--	--	--	--	--	--	--	29	1440	95
APR										
19...	--	--	--	--	56000	--	--	3	88	100
MAY										
17...	--	--	--	--	120000	10.9	13.4	--	--	--
JUN										
07...	--	--	--	--	53000	--	--	8	61	100
07...	--	--	--	--	--	11.0	13.8	--	--	--
JUL										
05...	--	--	--	--	66000	--	--	--	--	--
26...	--	--	--	--	32000	--	--	22	153	85
AUG										
02...	--	--	--	--	24000	--	--	29	163	89
02...	--	--	--	--	--	4.80	6.10	--	--	--
09...	--	--	--	--	39000	--	--	50	328	96
16...	--	--	--	--	34000	--	--	17	85	100
23...	--	--	--	--	46000	--	--	23	131	100
30...	--	--	--	--	--	--	--	16	66	75
SEP										
06...	ND	--	--	--	47000	--	--	30	119	45
15...	--	--	--	--	23000	--	--	20	72	83

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	331	282	307	196	181	190	277	261	269	304	263	287
2	308	189	255	221	185	200	277	263	271	322	278	299
3	225	148	184	216	204	210	292	270	278	309	277	293
4	195	144	163	226	202	216	293	277	286	311	276	291
5	193	178	184	239	218	229	299	278	290	312	277	296
6	193	171	176	236	221	229	296	284	291	313	281	297
7	201	177	189	239	224	232	295	166	284	303	277	289
8	220	195	205	241	226	234	252	190	224	325	290	307
9	216	121	177	237	229	233	267	174	211	331	303	315
10	153	117	135	244	210	226	277	202	250	322	291	306
11	136	116	126	253	227	238	217	189	208	326	303	315
12	159	129	152	270	236	250	214	196	205	339	311	327
13	179	151	164	269	244	254	211	190	201	340	311	330
14	202	173	186	284	243	263	206	190	198	356	325	342
15	220	191	204	296	265	284	206	190	197	358	317	340
16	226	210	220	309	277	293	208	182	201	342	320	332
17	236	221	230	317	284	301	212	195	205	367	327	346
18	240	227	234	329	292	313	215	203	209	378	336	360
19	255	227	241	342	300	322	218	206	212	360	330	350
20	258	207	247	341	318	330	221	208	217	384	344	372
21	225	168	199	345	313	328	241	207	222	375	325	355
22	219	194	206	333	317	323	247	214	232	365	325	345
23	247	209	226	313	297	304	247	223	238	367	325	351
24	228	176	205	315	282	297	251	213	237	367	323	345
25	210	180	198	314	287	302	261	228	246	362	318	340
26	209	198	205	304	260	283	264	235	251	370	329	345
27	201	182	190	273	255	264	260	232	248	374	325	352
28	197	170	182	271	260	265	267	233	251	374	345	361
29	186	174	180	274	263	269	277	252	263	403	340	374
30	198	179	188	274	260	266	283	258	271	399	356	376
31	195	179	187	---	---	---	282	258	269	383	340	363
MONTH	331	116	198	345	181	265	299	166	240	403	263	332

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	384	347	370	199	176	186	192	178	184	261	237	253
2	384	347	369	190	172	179	198	158	185	263	243	253
3	392	357	376	179	169	175	168	132	158	274	254	265
4	383	362	371	185	175	181	175	132	157	286	260	278
5	384	352	369	217	178	190	159	127	138	291	274	284
6	404	352	388	207	176	191	143	122	133	291	273	284
7	423	384	402	199	170	182	146	137	141	286	259	273
8	401	369	380	185	180	182	153	142	147	261	246	254
9	388	345	369	183	174	178	166	149	157	297	260	279
10	366	333	350	189	178	184	172	159	166	296	281	291
11	353	296	325	192	184	188	182	172	176	308	290	299
12	324	279	300	198	189	193	192	175	185	309	294	304
13	318	244	279	200	147	187	201	186	192	310	287	296
14	257	209	232	191	144	168	209	196	201	299	246	293
15	240	208	219	193	156	169	213	202	207	300	290	294
16	260	233	247	159	149	155	215	208	212	313	295	300
17	309	260	280	157	152	155	221	211	217	324	299	307
18	313	277	292	166	152	161	227	214	220	317	294	303
19	296	258	273	174	159	167	232	214	222	307	290	298
20	268	251	262	181	170	177	234	217	226	306	285	297
21	279	264	271	187	175	180	235	220	227	308	293	299
22	289	257	271	189	145	172	237	223	231	317	289	301
23	284	241	256	172	146	158	241	225	233	313	290	299
24	288	240	265	169	141	156	250	229	239	312	297	306
25	262	224	245	155	149	153	250	243	246	320	304	315
26	263	216	240	169	152	159	246	198	222	325	311	318
27	268	202	237	172	162	167	223	194	206	344	308	324
28	245	195	226	181	166	173	245	222	233	342	306	325
29	---	---	---	187	170	178	253	236	244	337	304	324
30	---	---	---	190	179	185	260	246	253	326	296	309
31	---	---	---	200	174	189	---	---	---	329	301	318
MONTH	423	195	302	217	141	175	260	122	199	344	237	295

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	352	325	339	345	270	310	365	342	355	497	476	484
2	383	337	368	295	254	274	366	315	331	499	481	489
3	402	361	384	309	252	283	353	326	338	495	474	485
4	392	340	369	319	277	300	353	323	335	497	481	489
5	354	325	342	326	294	305	374	346	356	---	---	---
6	370	337	357	352	311	328	400	364	384	---	---	---
7	395	344	387	366	336	353	424	397	405	---	---	---
8	407	361	384	368	346	357	428	400	415	---	---	---
9	383	352	364	372	351	364	421	396	411	---	---	---
10	378	345	361	373	351	365	430	394	412	---	---	---
11	371	339	360	365	350	356	401	386	393	---	---	---
12	374	337	358	364	341	354	396	378	388	---	---	---
13	370	334	352	357	295	334	412	385	395	---	---	---
14	378	339	361	361	344	354	411	389	397	---	---	---
15	390	354	373	370	346	359	413	360	386	464	445	453
16	404	366	386	381	348	364	403	386	397	476	457	469
17	389	348	373	382	363	374	412	393	400	479	467	473
18	365	326	345	377	332	355	421	407	412	479	464	472
19	380	351	365	368	346	359	436	406	424	465	448	459
20	395	345	371	368	355	361	433	349	401	452	442	448
21	354	306	332	391	344	364	375	317	349	460	445	454
22	347	325	338	369	340	360	389	354	375	455	442	449
23	347	320	332	354	331	342	406	376	389	467	447	456
24	357	313	334	343	278	320	410	383	395	474	453	465
25	350	309	331	287	269	279	408	376	397	486	474	480
26	360	323	345	332	286	314	408	385	398	510	479	494
27	363	328	345	355	326	342	402	386	394	549	514	534
28	375	347	360	377	338	360	425	398	406	551	536	546
29	365	310	347	377	355	365	450	423	436	554	536	544
30	349	307	334	377	348	360	464	443	451	556	525	537
31	---	---	---	367	344	360	488	464	474	---	---	---
MONTH	407	306	357	391	252	341	488	315	394	556	442	484

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	17.5	18.0	10.0	9.0	9.5	4.5	3.5	4.0	0.0	0.0	0.0
2	17.5	15.5	17.0	9.5	8.5	9.0	4.5	3.5	4.0	0.5	0.0	0.0
3	16.0	15.0	15.5	9.0	8.5	9.0	3.5	2.5	3.0	0.0	0.0	0.0
4	16.0	15.5	15.5	9.5	8.5	9.0	3.0	2.5	2.5	0.0	0.0	0.0
5	17.0	16.0	16.0	9.5	9.0	9.0	3.5	2.0	2.5	0.0	0.0	0.0
6	17.5	16.0	16.5	9.0	8.0	8.5	3.5	2.5	3.0	0.0	0.0	0.0
7	18.0	17.0	17.5	9.0	8.5	9.0	4.5	3.0	4.0	0.0	0.0	0.0
8	18.5	18.0	18.0	9.0	7.5	8.0	4.0	3.0	4.0	0.0	0.0	0.0
9	18.5	18.0	18.5	7.5	6.5	6.5	3.0	1.5	2.0	0.0	0.0	0.0
10	17.5	16.0	16.5	7.5	5.5	6.5	2.5	2.0	2.0	0.0	0.0	0.0
11	15.5	14.5	15.0	7.5	6.5	7.0	3.0	2.5	2.5	0.0	0.0	0.0
12	14.0	13.5	13.5	7.5	7.0	7.5	3.5	3.0	3.0	0.0	0.0	0.0
13	13.5	13.0	13.0	7.0	6.0	6.5	4.0	3.5	3.5	0.0	0.0	0.0
14	14.0	13.0	13.5	7.0	5.5	6.0	3.5	2.5	3.0	0.0	0.0	0.0
15	14.5	13.0	13.5	7.5	6.5	7.0	3.5	2.5	3.0	0.0	0.0	0.0
16	14.5	13.5	14.0	7.5	6.5	7.0	4.5	3.5	4.0	0.0	0.0	0.0
17	14.0	13.0	13.5	7.0	6.5	7.0	5.0	4.0	4.5	0.0	0.0	0.0
18	13.5	12.0	12.5	7.5	6.5	7.0	5.0	4.0	4.5	0.0	0.0	0.0
19	13.0	11.5	12.5	8.0	6.5	7.5	4.5	4.0	4.5	0.0	0.0	0.0
20	12.5	12.0	12.5	8.0	7.5	7.5	5.0	4.5	4.5	0.0	0.0	0.0
21	12.5	11.5	11.5	8.0	7.0	7.5	5.0	1.5	3.5	0.0	0.0	0.0
22	11.5	10.5	11.0	7.5	6.5	7.0	1.5	0.5	1.0	0.0	0.0	0.0
23	11.0	10.0	10.5	6.0	5.5	5.5	1.5	1.0	1.0	0.0	0.0	0.0
24	10.5	10.0	10.0	5.5	4.5	5.0	1.5	0.0	0.5	0.0	0.0	0.0
25	10.5	10.0	10.0	5.5	5.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
26	11.0	10.5	11.0	7.5	5.0	6.0	1.0	0.0	0.0	0.0	0.0	0.0
27	10.5	9.5	10.5	9.0	7.5	8.0	1.0	0.0	0.5	0.0	0.0	0.0
28	10.0	9.0	9.5	9.5	9.0	9.0	3.0	0.5	1.5	0.5	0.0	0.0
29	9.5	8.5	9.0	9.5	7.0	8.5	3.0	1.5	2.5	0.5	0.0	0.0
30	9.0	8.0	8.5	7.0	5.0	5.5	2.0	0.0	0.5	0.0	0.0	0.0
31	9.5	8.5	9.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	18.5	8.0	13.5	10.0	4.5	7.5	5.0	0.0	2.5	0.5	0.0	0.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	6.5	4.5	5.5	15.0	13.0	14.0	20.5	18.0	---
2	0.5	0.0	0.0	7.0	5.0	6.0	14.0	12.5	13.5	20.5	19.0	---
3	0.0	0.0	0.0	7.5	5.5	6.5	13.5	12.0	13.0	22.5	19.5	21.5
4	0.0	0.0	0.0	8.0	6.5	7.0	12.0	11.5	11.5	22.5	20.0	21.0
5	1.0	0.0	0.5	8.5	7.0	7.5	11.0	9.0	10.0	22.0	19.5	20.0
6	0.5	0.0	0.5	7.5	6.0	6.5	9.0	8.5	9.0	23.0	20.5	21.5
7	0.5	0.0	0.0	8.0	6.5	7.0	9.5	8.5	9.0	23.0	21.5	22.0
8	0.0	0.0	0.0	9.0	7.0	8.0	10.0	9.0	9.5	22.5	19.5	21.0
9	0.0	0.0	0.0	9.5	7.5	8.5	10.0	9.0	9.5	21.5	17.0	18.5
10	0.5	0.0	0.0	10.5	8.5	9.5	10.5	9.0	9.5	17.0	15.0	15.5
11	3.0	0.5	1.0	11.5	9.0	10.5	12.0	9.5	10.5	17.5	15.0	16.0
12	3.0	2.0	2.5	12.5	10.5	11.5	15.0	11.5	13.0	20.0	15.5	17.5
13	3.0	1.5	2.0	13.5	12.0	13.0	16.5	14.0	15.0	22.0	18.5	20.0
14	2.5	1.5	2.0	13.0	11.5	12.5	17.5	15.5	16.5	23.5	20.5	22.0
15	3.0	1.5	2.0	11.5	11.0	11.0	18.5	16.0	17.0	23.5	20.5	22.5
16	2.0	0.5	1.5	11.5	10.5	11.0	19.0	16.0	17.5	24.0	21.0	22.5
17	1.5	0.0	0.5	11.0	10.0	10.5	19.5	16.0	18.0	25.0	22.0	23.5
18	1.0	0.0	0.0	11.0	10.0	10.5	20.0	17.0	18.5	26.0	23.0	24.5
19	2.0	0.0	1.0	11.0	9.5	10.5	20.0	18.5	19.0	26.5	24.0	25.0
20	3.0	2.0	2.5	10.5	9.0	10.0	20.5	19.5	---	27.5	24.5	26.0
21	2.5	1.5	2.0	10.0	8.5	9.0	22.0	19.0	---	28.0	25.5	26.5
22	3.5	1.0	1.5	9.5	7.5	9.0	21.5	20.0	---	27.5	25.5	26.5
23	5.5	1.0	3.0	7.5	6.5	7.0	22.5	21.0	---	27.5	25.5	26.5
24	6.5	4.0	5.0	7.5	6.5	7.0	22.5	21.5	---	27.5	25.5	26.5
25	7.5	5.0	6.5	7.5	6.0	7.0	21.5	20.5	---	26.5	25.0	25.5
26	8.5	6.5	7.5	8.5	6.5	7.5	21.0	19.0	---	26.5	24.5	25.0
27	8.5	5.0	6.5	9.0	7.0	8.0	19.0	17.5	---	27.5	24.5	26.0
28	5.5	4.5	5.0	9.5	8.5	8.5	19.0	18.0	---	28.0	25.5	26.5
29	---	---	---	11.5	9.0	10.5	19.0	17.0	---	28.0	26.5	27.0
30	---	---	---	14.0	11.5	12.5	20.0	17.0	---	27.5	24.0	25.0
31	---	---	---	14.5	13.0	13.5	---	---	---	24.5	23.5	23.5
MONTH	8.5	0.0	2.0	14.5	4.5	9.0	22.5	8.5	13.5	28.0	15.0	23.0

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	23.0	23.5	30.5	27.5	29.0	27.5	25.0	27.0	29.5	28.5	---
2	25.5	24.5	25.0	29.5	27.5	28.5	28.0	25.0	26.5	29.5	29.0	---
3	26.0	24.0	25.0	29.5	27.5	28.5	29.0	26.5	27.5	29.0	28.5	---
4	25.5	23.5	24.5	29.0	28.0	28.5	28.5	26.0	27.5	28.5	28.0	---
5	26.0	24.0	25.0	30.0	28.5	29.0	29.0	27.5	28.0	28.5	27.5	---
6	24.5	22.5	23.5	31.5	29.0	30.5	29.0	27.0	28.0	28.5	27.5	28.5
7	22.5	20.5	21.5	32.5	30.5	31.0	30.0	28.0	28.5	28.0	27.0	27.5
8	20.5	19.0	20.0	31.5	29.5	30.5	30.5	27.5	29.0	27.5	26.5	27.0
9	21.0	19.0	20.0	31.5	29.0	30.0	30.5	29.0	29.5	26.5	25.0	25.5
10	19.5	18.5	19.0	30.5	28.5	29.5	30.0	28.5	29.0	25.0	24.5	24.5
11	22.0	18.5	19.5	29.5	27.0	28.5	30.5	29.0	29.5	25.0	24.0	24.5
12	24.0	21.0	22.0	28.5	27.0	27.5	31.0	29.5	30.0	24.0	23.0	23.5
13	24.5	23.0	24.0	29.5	27.0	28.0	30.5	28.0	29.5	23.0	22.5	23.0
14	25.5	24.0	24.5	30.5	28.5	29.5	28.5	27.5	28.0	23.0	23.0	23.0
15	26.5	25.5	25.5	30.0	27.5	29.0	29.0	27.0	29.0	22.5	21.0	22.0
16	28.0	26.5	27.0	31.0	28.5	30.0	29.0	27.0	28.0	21.0	20.5	20.5
17	29.0	28.0	28.5	31.5	29.5	30.5	29.0	27.5	28.0	22.5	20.5	21.5
18	29.5	27.0	28.5	32.0	30.0	31.0	28.0	25.0	26.5	24.5	22.5	23.5
19	30.5	27.5	29.0	32.5	30.0	31.5	26.5	25.5	26.0	26.0	24.0	25.0
20	28.5	26.5	27.0	33.0	30.5	32.0	27.0	25.5	26.0	26.5	25.5	26.0
21	28.0	25.0	26.5	32.0	31.0	31.5	26.5	23.5	25.0	25.5	24.0	25.0
22	27.0	25.0	26.0	31.5	29.5	30.5	26.0	24.5	25.0	24.0	23.0	23.5
23	26.5	25.0	25.5	30.5	27.5	29.0	27.0	25.5	26.0	23.5	23.0	23.0
24	26.5	25.5	26.0	29.5	27.0	28.5	27.0	25.5	26.0	23.5	23.0	23.0
25	26.5	25.5	26.0	29.0	26.5	27.5	26.0	25.0	25.5	23.5	23.0	23.0
26	27.5	25.5	26.5	27.0	25.0	26.0	26.0	25.0	25.5	22.5	22.0	22.5
27	28.5	26.5	27.5	26.0	24.5	25.5	26.0	25.0	25.5	22.5	22.0	22.0
28	30.0	28.0	29.0	26.5	24.5	25.5	27.0	26.0	---	22.0	21.5	22.0
29	30.0	28.0	29.0	25.5	24.5	25.0	28.5	27.0	---	21.5	20.0	21.0
30	30.5	28.0	29.0	25.5	24.0	24.5	29.0	28.0	---	21.0	20.0	20.5
31	---	---	---	26.5	24.0	25.5	29.0	28.0	---	---	---	---
MONTH	30.5	18.5	25.0	33.0	24.0	29.0	31.0	23.5	27.5	29.5	20.0	23.5

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

DATE	OCT 12,76	NOV 9,76	DEC 7,76	JAN 11,77	FEB 22,77	APR 19,77
TIME	1045	1000	1015	1115	1000	1000
TOTAL CELLS/ML	3400	19000	1100	950	970	56000
DIVERSITY: DIVISION	1.0	0.2	0.5	1.1	0.4	1.4
.CLASS	1.0	0.2	0.5	1.1	0.4	1.4
..ORDER	1.2	0.2	1.1	1.6	0.5	1.7
...FAMILY	1.8	0.2	2.4	2.0	2.3	1.9
....GENUS	1.8	1.2	2.6	2.2	2.3	2.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...CHARACIACEAE												
....CHARACIUM	--	-	--	-	15	1	--	-	--	-	--	-
....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-	--	-
...COELASTRACEAE												
....COELASTRUM	--	-	--	-	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE												
....PEDIASTRUM	--	-	--	-	--	-	--	-	--	-	--	-
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	--	-	--	-	*	0
....MICRACTINIUM	--	-	--	-	--	-	--	-	34	3	580	1
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	--	-	--	-	6	1	17	2	27000#	49
....CHODATELLA	--	-	--	-	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-	*	0
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-	--	-
....PLANKTOSPHAERIA	--	-	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-	290	1
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	670	3	15	1	--	-	--	-	290	1
....TETRASTRUM	--	-	--	-	--	-	--	-	--	-	290	1
..TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	--	-	--	-
..ULOTRICHALES												
...ULOTRICHACEAE												
....HORMIDIUM	--	-	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CARTERIA	--	-	--	-	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	--	-	--	-	77	7	17	2	17	2	1700	3
...VOLVOCACEAE												
....PANDORINA	--	-	--	-	--	-	--	-	--	-	*	0
..ZYGNEMATALES												
...DESMIDIACEAE												
....ARTHRODESMUS	--	-	--	-	--	-	--	-	--	-	--	-
....CLOSTERIUM	--	-	--	-	--	-	--	-	--	-	--	-
....COSMARIUM	--	-	--	-	--	-	--	-	--	-	--	-
....STAURASTRUM	--	-	--	-	--	-	--	-	--	-	--	-
..CHLOROCOCCALES												
...OOCYSTACEAE												
....GLOEOACTINIUM	--	-	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CONTINUED

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977 (CONTINUED)

DATE TIME	OCT 12,76 1045		NOV 9,76 1000		DEC 7,76 1015		JAN 11,77 1115		FEB 22,77 1000		APR 19,77 1000	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	--	-	8000#	41	120	10	61	6	--	-	15000#	27
....MELOSIRA	200	6	11000#	55	--	-	--	-	--	-	1300	2
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-	--	-
..PENNALES												
...ACHNANTHACEAE												
....COCCONEIS	50	1	--	-	--	-	--	-	--	-	*	0
....RHOICOSPHENIA	--	-	--	-	8	1	--	-	--	-	--	-
...CYMBELLACEAE												
....AMPHORA	150	4	--	-	*	0	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-	--	-	*	0
...DIATOMACEAE												
....DIATOMA	--	-	--	-	8	1	22	2	42	4	*	0
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	--	-	--	-	--	-	--	-	*	0
....FRAGILARIA	--	-	--	-	31	3	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	370#	33	22	2	340#	35	*	0
...GOMPHONEMATACEAE												
....GOMPHONEMA	250	7	--	-	46	4	28	3	360#	37	*	0
...MERIDIONACEAE												
....MERIDION	--	-	--	-	8	1	--	-	25	3	*	0
...NAVICULACEAE												
....GYROSIGMA	--	-	--	-	*	0	--	-	--	-	--	-
....NAVICULA	300	9	--	-	39	3	83	9	17	2	580	1
...NITZSCHIACEAE												
....NITZSCHIA	200	6	--	-	390#	34	11	1	110	11	1100	2
...SURIRELLACEAE												
....SURIRELLA	--	-	--	-	8	1	6	1	8	1	*	0
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
....OCHROMONAS	--	-	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROCCOCCALES												
...CHROCCOCCAEAE												
....AGMENELLUM	--	-	--	-	--	-	22	2	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	22	2	--	-	7000	13
..HORMOGONALES												
...OSCILLATORIACEAE												
....OSCILLATORIA	2200#	65	--	-	--	-	610#	64	8	1	--	-
....SPIRULINA	--	-	--	-	--	-	28	3	--	-	--	-
....PHORMIMIDIUM	--	-	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.CRYPTOPHYCEAE												
..CRYPTOMONIDALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE												
....CRYPTOMONAS	--	-	--	-	8	1	--	-	--	-	--	-
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	50	1	--	-	--	-	17	2	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	6	1	--	-	--	-
...PERIDINIACEAE												
....PERIDINIUM	--	-	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

DATE	MAY 17,77		JUN 7,77		JUL 5,77		JUL 26,77		AUG 2,77	
TIME	1000		0950		1015		1015		1030	
TOTAL CELLS/ML	120000		53000		66000		32000		24000	
DIVERSITY: DIVISION	1.4		1.1		1.1		1.3		1.1	
.CLASS	1.4		1.1		1.1		1.3		1.1	
..ORDER	2.0		1.3		1.4		1.4		1.2	
...FAMILY	2.5		2.7		2.8		2.1		1.9	
....GENUS	3.1		3.6		3.3		2.6		2.3	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....CHARACIUM	--	-	--	-	--	-	--	-	--	-
....SCHROEDERIA	--	-	--	-	*	0	280	1	--	-
...COELASTRACEAE										
....COELASTRUM	*	0	--	-	1600	2	4500	14	1400	6
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	2300	4	1400	2	--	-	840	4
...MICRACTINIACEAE										
....GOLENKINIA	--	-	660	1	--	-	--	-	--	-
....MICRACTINIUM	2200	2	7700	14	11000#	16	--	-	340	1
...OOCYSTACEAE										
....ANKISTRODESMUS	5300	4	8800#	17	870	1	420	1	250	1
....CHODATELLA	*	0	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	2500	2	--	-	700	1	--	-	--	-
....KIRCHNERIELLA	7400	6	3500	7	3100	5	6100#	19	170	1
....OOCYSTIS	2200	2	--	-	350	1	--	-	--	-
....PLANKTOSPHAERIA	--	-	--	-	*	0	--	-	--	-
....TETRAEDRON	*	0	--	-	*	0	--	-	--	-
....TREUBARIA	860	1	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	1500	1	4100	8	*	0	--	-	--	-
....CRUCIGENIA	--	-	3300	6	--	-	--	-	1200	5
....SCENEDESMUS	30000#	25	7600	14	15000#	22	3100	10	13000#	55
....TETRASTRUM	2500	2	660	1	1400	2	--	-	--	-
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	2800	4	--	-	--	-
..ULOTRICHALES										
...ULOTRICHACEAE										
....HORMIDIUM	--	-	--	-	1000	2	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	*	0	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	2000	2	--	-	*	0	--	-	--	-
...VOLVOCACEAE										
....PANDORINA	--	-	--	-	--	-	--	-	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....ARTHRODESMUS	--	-	--	-	--	-	*	0	--	-
....CLOSTERIUM	--	-	--	-	*	0	--	-	--	-
....COSMARIUM	*	0	--	-	--	-	--	-	--	-
....STAURASTRUM	--	-	--	-	--	-	--	-	*	0
..CHLOROCOCCALES										
...OOCYSTACEAE										
....GLOEOACTINIUM	--	-	--	-	11000#	16	--	-	--	-

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CONTINUED

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

(CONTINUED)

DATE	MAY 17,77		JUN 7,77		JUL 5,77		JUL 26,77		AUG 2,77	
TIME	1000		0950		1015		1015		1030	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	6700	6	4700	9	3800	6	2400	8	1600	7
....MELOSIRA	*	0	--	-	--	-	--	-	3100	13
....STEPHANODISCUS	--	-	660	1	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	--	-
....CYMBELLA	*	0	--	-	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	1200	2	*	0	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	*	0	660	1	--	-	--	-	--	-
...MERIDIONACEAE										
....MERIDION	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....GYROSIGMA	--	-	--	-	--	-	--	-	--	-
....NAVICULA	*	0	1100	2	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	*	0	2100	4	*	0	*	0	250	1
...SURIRELLACEAE										
....SURIRELLA	--	-	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....OCHROMONAS	*	0	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCAEAE										
....AGMENELLUM	--	-	--	-	11000#	17	9100#	29	--	-
....ANACYSTIS	23000#	20	4200	8	--	-	5400#	17	1500	6
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	3000	2	--	-	--	-	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	--	-	--	-
....PHORMIMIDIUM	27000#	22	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	620	1	--	-	350	1	--	-	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	990	1	--	-	*	0	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	*	0	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	*	0	--	-	--	-
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	AUG 9,77 1000	AUG 16,77 1015	AUG 23,77 1000	SEP 6,77 1040	SEP 15,77 1000
TOTAL CELLS/ML	39000	39000	46000	47000	23000
DIVERSITY: DIVISION	0.5	1.0	0.8	0.9	0.8
.CLASS	0.5	1.0	0.8	0.9	0.8
..ORDER	0.6	1.1	0.8	0.9	1.1
...FAMILY	0.8	1.3	1.1	2.0	1.3
....GENUS	1.2	1.4	1.4	2.6	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....CHARACIUM	--	-	--	-	--	-	--	-	--	-
....SCHROEDERIA	--	-	--	-	--	-	--	-	*	0
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	980	2	3300	7	470	2
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	670	2	1200	3	1700	4	--	-
...MICRACTINIACEAE										
....GOLENKINIA	*	0	--	-	--	-	*	0	--	-
....MICRACTINIUM	--	-	--	-	--	-	420	1	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	670	2	--	-	620	1	140	1
....CHODATELLA	--	-	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	460	1	330	1	--	-	3100	7	--	-
....OOCYSTIS	--	-	--	-	--	-	1700	4	--	-
....PLANKTOSPHAERIA	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	310	1	--	-	--	-	*	0	--	-
....TREUBARIA	--	-	--	-	--	-	*	0	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	1700	4	--	-	980	2	--	-	3800#	16
....CRUCIGENIA	--	-	--	-	980	2	830	2	--	-
....SCENEDESMUS	31000#	80	14000#	37	34000#	74	26000#	55	14000#	58
....TETRASTRUM	620	2	--	-	--	-	830	2	--	-
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	1500	6
..ULOTRICHALES										
...ULOTRICHACEAE										
....HORMIDIUM	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	-	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	--	-	--	-	*	0	--	-	--	-
...VOLVOCACEAE										
....PANDORINA	--	-	--	-	--	-	--	-	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....ARTHRODESMUS	--	-	--	-	--	-	--	-	--	-
....CLOSTERIUM	--	-	--	-	--	-	--	-	--	-
....COSMARIUM	--	-	--	-	--	-	--	-	--	-
....STAURASTRUM	--	-	--	-	--	-	--	-	--	-
..CHLOROCOCCALES										
...OOCYSTACEAE										
....GLOEOACTINIUM	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01645500 POTOMAC RIVER AT GREAT FALLS, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977 (CONTINUED)

DATE	AUG 9,77		AUG 16,77		AUG 23,77		SEP 6,77		SEP 15,77	
TIME	1000		1015		1000		1040		1000	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	4200	11	22000#	57	2700	6	1000	2	1000	4
....MELOSIRA	--	-	--	-	--	-	420	1	--	-
....STEPHANODISCUS	--	-	--	-	--	-	4400	9	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	620	2	--	-	--	-	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	--	-	*	0	--	-
...MERIDIONACEAE										
....MERIDION	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....GYROSIGMA	--	-	--	-	--	-	--	-	--	-
....NAVICULA	--	-	670	2	--	-	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	--	-	--	-	--	-	*	0	--	-
...SURIRELLACEAE										
....SURIRELLA	--	-	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....OCHROMONAS	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCAEAE										
....AGMENELLUM	--	-	--	-	4900	11	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	1200	3	2800	12
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	--	-	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	--	-	--	-
....PHORMIMIDIUM	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	830	2	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	--	-	--	-
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01646500 POTOMAC RIVER NEAR WASHINGTON, DC

LOCATION.--Lat 38°56'58", long 77°07'40", Montgomery County, Md., Hydrologic Unit 02070008, on left bank just above
Little Falls Dam, 1 mi (1.6 km) upstream from District of Columbia boundary line, 1.2 mi (1.9 km) upstream from
Chain Bridge, 1.8 mi (2.9 km) east of Langley, Fairfax County, Va., and at mile 117.4 (188.9 km).
DRAINAGE AREA.--11,560 mi² (29,940 km²).
PERIOD OF RECORD.--March 1930 to current year.
REVISED RECORDS.--WSP 726: Drainage area. WDR MD-DE-75-1: 1973-74(M).
GAGE.--Water-stage recorder and concrete control. Datum of gage is 37.95 ft (11.567 m) above mean sea level.
Prior to June 7, 1930, nonrecording gage, and June 7, 1930, to Jan. 22, 1965, water-stage recorder at site 1 mi
(1.6 km) upstream on right bank at same datum.
REMARKS.--Records good. Diversions at Great Falls through aqueducts, and since June 1959, from gage pool at Little
Falls Dam, for municipal supply of Washington, D. C.; since October 1958, at Rockville Filtration Plant, for mu-
nicipal supply of city of Rockville; since April 1961, at Potomac Filtration Plant for water supply of Washing-
ton Suburban Sanitary District; since October 1961, at Fairfax Water Treatment Plant for water supply of city of
Fairfax (from Goose Creek); and since April 1964, at Violets Lock to Chesapeake and Ohio Canal. Low flow af-
fected slightly by Stony River Reservoir (see station 01595200) and since December 1950, by Savage River Reser-
voir (see station 01597500). Low flow affected extensively at times by run-of-the-river hydroelectric plants.
Gage-height telemeter at station.
AVERAGE DISCHARGE.--47 years, 11,170 ft³/s (316.3 m³/s), 13.12 in/yr (333 mm/yr), adjusted for diversions.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 484,000 ft³/s (13,700 m³/s) Mar. 19, 1936, gage height, 28.1 ft
(8.56 m) site then in use; minimum daily observed at gaging station, 121 ft³/s (3.43 m³/s) Sept. 9, 1966, does
not include diversion of 489 ft³/s (13.8 m³/s) for municipal use; minimum daily (adjusted), 601 ft³/s
(17.0 m³/s) Sept. 10, 1966, includes diversion of 449 ft³/s (12.7 m³/s) for municipal use.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, was of approximately the same magnitude as that of
March 19, 1936.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 45,000 ft³/s (1,200 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 11	0630	*208000	5890	13.18	4.017	Mar. 24	0030	45400	1290	6.46	1.969
Mar. 15	1630	59700	1690	7.18	2.188	Apr. 7	0130	94200	2670	8.64	2.633

Minimum daily discharge, 796 ft³/s (22.5 m³/s) Sept. 22, does not include diversion for municipal use; minimum
daily (adjusted), 1,330 ft³/s (37.7 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2830	25500	6440	3710	3580	17600	17700	7310	2660	2500	1700	1050
2	18800	25300	6350	3000	3340	16400	16300	7050	2500	2040	1740	1090
3	42600	24800	6690	3600	3220	14300	26500	6870	2340	1840	1340	1250
4	43100	21900	6610	3800	3220	12300	35700	6520	2450	1740	1250	1290
5	32700	19900	6100	3600	3400	15200	46600	6350	2290	1510	1090	1170
6	21100	18100	5860	3600	2820	25900	81400	6190	2450	1420	1050	1090
7	14300	16400	8340	3800	2930	26600	87200	6350	2450	1420	936	1210
8	11300	14500	14800	3600	3100	21200	57900	6350	2290	1290	1340	1170
9	42600	12800	22500	3800	3100	18000	40500	6190	2450	1210	2040	1090
10	167000	11800	27700	4440	3220	15400	31700	6020	2710	1210	1290	1130
11	194000	11000	22300	4100	3710	13500	25900	6100	2820	1250	1050	1170
12	95000	10400	18200	3200	4300	12100	22300	5700	2770	2240	1210	1090
13	44000	9860	15900	3600	5780	13200	19500	5240	2550	2340	1170	1090
14	30700	9550	14600	4000	6610	29800	17100	4860	2400	2040	1170	936
15	23600	9040	13600	3800	7680	55400	15400	4580	2450	2400	1560	899
16	19400	8640	12300	3400	7680	47900	14000	4370	2550	2090	1340	864
17	16400	8250	11100	3200	7500	33600	12900	4160	2610	1890	1250	864
18	14200	7770	10700	3600	7220	25900	11900	3830	3280	2140	1210	864
19	12400	7770	10200	3600	6690	21200	11100	3770	3520	1990	2090	830
20	11800	7400	9970	3800	6020	20300	10400	3710	3280	1740	1840	864
21	17000	7050	9140	3800	5240	20300	9760	3580	3340	1890	1890	830
22	19500	6780	8250	3600	5160	21300	9240	3460	2880	2140	1790	796
23	23900	6610	7680	3600	5240	33900	8840	3400	2340	3460	1600	1010
24	22300	6350	7050	3600	5240	42900	8440	3340	2140	2990	2550	1170
25	20800	6270	6780	4000	5860	33900	8440	3460	1990	2710	2290	973
26	25900	6100	6270	4000	7870	27100	11000	3280	1990	2190	1470	1010
27	37100	5940	6100	4510	21500	22500	9140	3160	1890	1990	1130	973
28	39000	5860	6020	4230	20000	19500	8150	2880	1700	1840	1050	1090
29	30200	6020	6190	3520	---	18400	7590	2770	2240	1650	973	1090
30	24100	6350	5760	3830	---	21600	7500	2770	2880	1650	899	1090
31	22900	---	5160	3580	---	20800	---	2710	---	1510	1010	---
TOTAL	1140530	344010	324680	115520	171230	738000	690100	146330	76210	60320	44318	31043
MEAN	36790	11470	10470	3726	6115	23810	23000	4720	2540	1946	1430	1035
MAX	194000	25500	27700	4510	21500	55400	87200	7310	3520	3460	2550	1290
MIN	2830	5860	5160	3000	2820	12100	7500	2710	1700	1210	899	796
(≠)	454	436	433	455	430	389	409	456	495	530	540	537
MEAN*	37240	11910	10900	4180	6550	24200	23410	5180	3040	2480	1970	1570
CFSM*	3.22	1.03	.94	.36	.57	2.09	2.03	.45	.26	.21	.17	.14
IN*	3.71	1.15	1.09	.42	.59	2.41	2.26	.52	.29	.25	.20	.15

CAL YR 1976 TOTAL 4330570 MEAN 11830 MAX 194000 MIN 1120 MEAN* 12310 CFSM* 1.06 IN* 14.46
WTR YR 1977 TOTAL 3882291 MEAN 10640 MAX 194000 MIN 796 MEAN* 11100 CFSM* .96 IN* 13.04

≠ Diversion in cfs, for municipal supply of Washington, D.C., Washington Suburban Sanitary District, city of
Rockville, city of Fairfax (from Goose Creek), and the Chesapeake and Ohio Canal (insignificant diversion to
canal during current water year); records furnished by Corps of Engineers, Washington Suburban Sanitary Commission,
city of Rockville, and city of Fairfax.
* Adjusted for diversion.

01646550 LITTLE FALLS BRANCH NEAR BETHESDA, MD

LOCATION.--Lat 38°57'27", long 77°06'31", Montgomery County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on Massachusetts Avenue, 0.3 mi (0.5 km) downstream from Willett Branch, 1.7 mi (2.7 km) upstream from mouth, and 2.0 mi (3.2 km) southwest of Bethesda.

DRAINAGE AREA.--4.1 mi² (10.6 km²), approximately.

PERIOD OF RECORD.--June 1944 to September 1959. Annual maximum, water years 1960-61. December 1961 to current year.

REVISED RECORDS.--WSP 1171: 1945.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 169.32 ft (51.609 m) above mean sea level (Maryland State Highway Administration bench mark). Prior to Oct. 1959, water-stage recorder and concrete control at site 50 ft (15 m) upstream at same datum. Oct. 1, 1959, to Nov. 30, 1961, crest-stage gage at present site and datum.

REMARKS.--Records good except those for period of no gage-height record, Dec. 9 to Feb. 12, which are fair. Occasional slight regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1945-59, 1963-77), 3.31 ft³/s (0.094 m³/s), 10.96 in/yr (278 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft³/s (75.9 m³/s) Sept. 14, 1966, gage height, 6.82 ft (2.079 m), from rating curve extended above 630 ft³/s (17.8 m³/s) on basis of slope-area measurement at gage height 5.92 ft (1.804 m); no flow at times in 1944, 1954, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
July 12	1745	755	21.4	3.71	1.131	Aug. 8	2015	*1190	33.7	4.56	1.390

Minimum daily discharge, 0.78 ft³/s (0.022 m³/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	1.7	1.2	1.1	1.2	1.2	1.4	1.4	1.2	1.1	9.1	.90
2	14	1.5	1.2	1.1	1.1	1.2	14	2.9	1.1	.97	1.2	.88
3	5.8	1.8	1.0	1.1	1.1	1.4	1.8	1.8	1.0	.96	.98	.90
4	1.6	1.5	1.2	1.1	1.2	2.8	8.7	6.4	1.0	.99	.90	.86
5	1.3	1.5	1.3	1.1	1.1	1.6	13	2.4	1.0	1.1	4.6	.98
6	.95	1.4	1.8	1.2	4.0	1.3	2.5	6.5	11	1.1	2.0	2.9
7	.90	1.5	42	1.2	1.4	1.4	2.2	3.2	1.5	2.8	7.2	1.0
8	.90	1.4	2.4	1.3	1.1	1.2	1.9	1.6	1.1	.95	45	.85
9	6.7	1.4	1.8	1.2	1.7	1.2	1.6	1.4	14	2.2	2.9	.93
10	1.6	1.4	1.7	1.8	10	1.3	1.5	1.4	1.3	1.7	6.1	1.1
11	1.3	1.2	2.1	1.3	5.0	1.3	1.6	1.3	1.1	3.2	1.2	.82
12	1.2	1.7	2.3	1.5	3.0	1.2	1.6	1.3	1.0	29	1.1	.83
13	1.1	1.1	1.9	1.3	1.7	30	1.6	1.3	1.4	2.0	1.4	.88
14	1.3	1.1	1.5	1.3	1.2	3.1	1.5	1.4	1.1	1.2	1.8	1.2
15	1.1	1.2	1.5	3.6	1.0	2.2	1.5	1.2	1.1	1.0	1.1	.95
16	1.0	1.3	1.7	1.4	1.0	1.8	1.4	2.0	1.1	1.0	1.1	2.9
17	3.6	1.3	1.6	1.2	1.2	1.5	1.4	1.4	13	5.3	1.1	1.2
18	1.2	1.4	1.4	1.2	1.3	4.3	1.5	1.5	7.7	1.8	.87	.92
19	1.1	1.3	1.4	1.3	1.4	1.3	1.6	1.5	1.6	1.0	.82	.83
20	31	1.2	4.0	1.3	1.2	4.2	1.5	1.4	5.7	3.1	.84	1.1
21	2.3	1.2	1.9	1.1	1.1	1.5	1.4	1.4	1.7	1.4	1.7	.78
22	1.4	1.2	1.4	1.1	1.1	26	1.4	1.3	1.1	1.1	.93	.84
23	1.3	1.3	1.5	1.1	1.1	2.3	1.4	1.3	1.1	1.0	.85	.98
24	6.6	1.3	1.2	1.2	12	1.8	8.4	1.2	1.1	1.0	16	.85
25	18	1.1	1.2	1.8	1.6	1.7	3.3	6.4	1.1	4.9	1.1	.80
26	12	1.1	3.0	1.3	1.2	1.6	1.8	1.3	1.0	1.3	.89	.98
27	1.9	2.2	1.6	1.2	1.3	1.7	1.5	1.2	1.1	1.0	.85	1.4
28	1.7	2.2	1.5	1.4	1.2	3.1	2.9	1.1	1.5	.95	.85	1.1
29	1.5	11	1.5	5.0	---	1.6	2.3	1.0	1.2	.95	.87	.91
30	7.0	1.2	1.3	2.0	---	1.5	1.6	1.3	1.0	2.0	.93	.90
31	20	---	1.1	1.2	---	1.4	---	1.4	---	.90	.97	---
TOTAL	156.55	51.7	92.2	46.0	62.5	109.7	89.8	62.2	80.9	78.97	117.25	32.47
MEAN	5.05	1.72	2.97	1.48	2.23	3.54	2.99	2.01	2.70	2.55	3.78	1.08
MAX	31	11	42	5.0	12	30	14	6.5	14	29	45	2.9
MIN	.90	1.1	1.0	1.1	1.0	1.2	1.4	1.0	1.0	.90	.82	.78
CFSM	1.23	.42	.72	.36	.54	.86	.73	.49	.66	.62	.92	.26
IN.	1.42	.47	.84	.42	.57	1.00	.81	.56	.73	.72	1.06	.29

CAL YR 1976 TOTAL 1354.37 MEAN 3.70 MAX 60 MIN .87 CFSM .90 IN 12.29
WTR YR 1977 TOTAL 980.24 MEAN 2.69 MAX 45 MIN .78 CFSM .66 IN 8.89

01647720 NORTH BRANCH ROCK CREEK NEAR NORBECK, MD

LOCATION.--Lat 39°06'59", long 77°06'09", Montgomery County, Hydrologic Unit 02070010, on left bank 550 ft (168 m) downstream from bridge on Muncaster Mill Road (State Highway 115), 0.7 mi (1.1 km) upstream from Manor Run, 1.5 mi (2.4 km) northwest of Norbeck, and 2 mi (3.2 km) upstream from mouth.

DRAINAGE AREA.--9.73 mi² (25.20 km²).

PERIOD OF RECORD.--October 1966 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 320 ft (98 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Jan. 13 to Feb. 19, which are fair. Diversion at low flow for irrigation of golf courses above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 11.8 ft³/s (0.334 m³/s), 16.47 in/yr (418 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) June 22, 1972, gage height, 14.1 ft (4.30 m), from floodmarks, from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of computation of peak flow through culvert and flow over road; minimum daily, 0.40 ft³/s (0.011 m³/s) July 17-18, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft³/s (9.63 m³/s) Mar. 13, gage height, 3.59 ft (1.094 m), no other peak above base of 300 ft³/s (8.5 m³/s); minimum daily, 0.49 ft³/s (0.014 m³/s) Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	8.0	5.0	4.4	4.2	6.3	6.2	5.1	2.9	1.6	1.3	1.0
2	24	6.5	5.1	4.1	4.2	5.8	35	4.8	2.7	1.6	1.5	.92
3	18	6.5	5.0	4.2	4.6	5.5	14	4.9	2.6	1.4	1.2	.87
4	6.0	6.0	4.5	4.5	4.2	7.1	36	4.8	2.4	1.4	1.2	.87
5	4.0	5.5	4.6	4.4	4.2	8.2	80	5.4	2.4	1.4	1.1	.83
6	3.8	5.5	4.9	4.5	4.6	6.9	22	20	2.7	1.3	1.1	.74
7	3.6	5.2	43	4.9	4.0	6.3	13	10	3.0	1.1	1.0	.73
8	10	5.2	11	4.9	4.2	5.8	11	6.5	2.6	1.1	1.4	.73
9	50	5.1	7.4	4.9	4.4	5.6	9.9	5.2	4.2	1.1	1.4	.73
10	10	5.1	6.8	5.3	14	5.7	9.5	5.1	3.5	1.2	1.6	.86
11	6.0	5.1	7.0	5.0	10	5.5	8.8	4.9	3.1	1.1	4.1	.79
12	5.0	5.1	7.9	5.4	8.0	5.5	8.4	4.6	2.7	7.4	1.5	.67
13	4.2	5.1	6.8	5.0	7.0	92	7.9	4.3	2.6	3.9	1.3	.71
14	3.8	5.1	5.8	4.8	6.5	24	7.6	4.1	2.6	1.8	9.1	.66
15	3.7	5.1	6.0	5.5	6.0	11	7.1	3.9	2.6	1.5	2.6	.59
16	3.9	4.9	6.3	5.0	5.0	8.5	7.0	3.8	2.7	1.4	1.6	.53
17	4.2	4.9	6.1	4.6	4.8	7.2	6.8	3.4	2.5	13	1.5	.61
18	4.3	5.0	5.7	4.6	4.8	10	6.6	3.2	4.4	12	1.5	.58
19	4.0	4.9	5.5	4.8	4.6	8.5	6.5	3.1	2.9	2.1	1.4	.56
20	38	4.8	6.1	4.8	4.7	9.7	6.2	3.2	6.3	2.4	1.3	.55
21	16	4.7	6.6	4.6	4.5	9.2	6.1	3.1	4.1	1.9	1.2	.53
22	6.4	4.7	5.4	4.4	4.6	69	5.7	3.1	2.6	1.6	1.2	.53
23	5.2	4.6	5.3	4.4	4.7	16	5.5	3.1	2.4	1.4	1.1	.50
24	6.9	4.5	5.6	4.6	14	10	6.3	3.1	2.3	1.4	2.2	.50
25	11	4.7	4.9	5.0	12	8.7	7.2	3.8	2.4	1.5	1.9	.50
26	12	4.7	5.5	4.8	8.0	8.0	6.1	4.1	2.5	1.9	1.2	.49
27	8.0	5.0	5.2	4.6	7.8	7.5	5.7	3.5	2.1	1.4	1.2	.51
28	6.5	5.0	5.1	5.0	7.6	8.7	5.7	3.2	1.9	1.2	1.1	.57
29	6.0	9.6	5.0	6.0	---	8.5	6.0	3.0	3.2	1.2	.98	.55
30	12	6.1	4.6	4.6	---	7.3	5.4	2.9	1.8	1.6	1.7	.53
31	18	---	4.5	4.6	---	6.8	---	2.8	---	1.4	2.7	---
TOTAL	326.5	162.2	218.2	148.2	177.2	404.8	369.2	146.0	86.7	76.3	55.18	19.74
MEAN	10.5	5.41	7.04	4.78	6.33	13.1	12.3	4.71	2.89	2.46	1.78	.66
MAX	50	9.6	43	6.0	14	92	80	20	6.3	13	9.1	1.0
MIN	3.6	4.5	4.5	4.1	4.0	5.5	5.4	2.8	1.8	1.1	.98	.49
CFSM	1.08	.56	.72	.49	.65	1.35	1.26	.48	.30	.25	.18	.07
IN.	1.25	.62	.83	.57	.68	1.55	1.41	.56	.33	.29	.21	.08

CAL YR 1976 TOTAL 3692.40 MEAN 10.1 MAX 260 MIN 1.5 CFSM 1.04 IN 14.12
WTR YR 1977 TOTAL 2190.22 MEAN 6.00 MAX 92 MIN .49 CFSM .62 IN 8.37

01647740 NORTH BRANCH ROCK CREEK NEAR ROCKVILLE, MD

LOCATION.--Lat 39°06'09", long 77°07'12", Montgomery County, Hydrologic Unit 02070010, on left bank 170 ft (52 m) downstream from outlet of Bernard Frank Lake, 370 ft (113 m) upstream from mouth, and 2.4 mi (3.9 km) northeast of Rockville.

DRAINAGE AREA.--12.5 mi^2 (32.4 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1967 to September 1977 (discontinued).

REVISIONS.--The maximum discharge for the water year 1976 has been revised to 101 ft^3/s (2.86 m^3/s) Oct. 1, stage falling, peak occurred Sept. 26, 1975; maximum peak discharge, 88 ft^3/s (2.49 m^3/s) Jan. 1, gage height, 2.49 ft (0.759 m); maximum gage height, 3.71 ft (1.131 m) Jan. 1 (backwater from Rock Creek).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 270 ft (82 m), from topographic map.

REMARKS.--Water-discharge records good. Flow regulated by dam above station.

AVERAGE DISCHARGE.--10 years, 16.1 ft^3/s (0.456 m^3/s), 17.49 in/yr (444 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 420 ft^3/s (11.9 m^3/s) June 22, 1972, gage height, 6.10 ft (1.859 m); maximum gage height, 9.62 ft (2.932 m) June 22, 1972, (backwater from Rock Creek); minimum discharge, 0.01 ft^3/s (<0.001 m^3/s) July 28-29, 1971, gage height, 0.64 ft (0.195 m), when drain valve at Bernard Frank Lake was closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27 ft^3/s (0.76 m^3/s) April 8, 9, 10, gage height, 1.60 ft (0.488 m); maximum gage height, 1.74 ft (0.530 m) March 13 (backwater from Rock Creek); minimum discharge, 0.44 ft^3/s (0.013 m^3/s) many days in September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	16	6.4	6.6	5.2	9.0	17	10	4.9	3.3	2.8	2.0
2	12	16	6.6	6.4	5.2	9.0	17	9.4	4.9	3.3	2.6	2.0
3	10	15	6.8	6.2	5.2	8.5	17	9.3	4.0	3.1	2.4	2.0
4	9.0	15	6.8	6.1	5.2	8.1	18	9.0	3.7	3.0	2.2	2.0
5	8.5	13	6.7	6.1	5.2	7.8	21	9.0	3.7	2.9	2.2	1.7
6	8.0	12	6.4	6.1	5.2	7.8	25	8.7	3.9	2.8	2.0	1.5
7	9.0	12	9.5	6.1	5.2	7.8	25	10	3.9	2.7	1.7	1.3
8	12	11	12	6.1	5.0	7.8	26	10	3.7	2.4	1.7	1.3
9	20	10	12	6.1	4.9	7.7	27	9.2	3.7	2.4	1.7	1.0
10	18	9.4	12	6.1	5.1	7.5	27	9.0	3.7	2.4	1.7	.84
11	16	8.2	12	6.1	7.0	7.3	26	8.6	3.7	2.3	1.7	.75
12	14	7.1	12	6.1	9.1	7.1	24	8.2	3.7	2.4	1.9	.67
13	13	7.1	11	6.1	10	9.0	24	8.2	3.7	4.0	1.9	.61
14	13	7.3	11	6.1	10	18	23	8.0	3.7	4.0	2.7	.49
15	12	7.1	11	6.1	10	19	22	7.6	3.7	3.9	4.0	.49
16	12	6.1	11	6.1	9.7	19	21	7.2	3.7	3.6	4.0	.44
17	11	5.5	10	6.1	9.4	19	21	7.0	3.7	3.5	3.9	.49
18	10	5.5	9.8	6.1	9.0	19	20	6.8	3.8	6.6	3.5	.49
19	9.0	5.5	9.4	5.9	8.6	17	18	6.5	4.0	6.7	3.5	.44
20	10	5.2	9.4	5.8	7.8	15	17	6.2	3.9	6.4	3.1	.44
21	16	5.2	9.4	5.7	7.5	15	16	6.0	3.9	5.9	2.7	.44
22	16	5.2	9.0	5.5	7.1	16	15	5.8	4.0	5.2	2.6	.44
23	15	5.2	8.6	5.5	6.8	19	15	5.5	4.0	4.9	2.5	.44
24	14	5.2	8.2	5.5	7.0	20	14	5.2	4.0	4.4	2.2	.44
25	14	5.2	7.8	5.5	8.3	21	14	5.2	3.8	4.3	2.6	.46
26	15	5.2	7.5	5.5	8.7	20	13	5.5	3.7	4.2	2.6	.47
27	16	5.2	7.5	5.5	9.0	19	13	4.9	3.7	3.7	2.6	.47
28	16	5.9	7.5	5.5	9.0	19	12	4.9	3.5	3.4	2.6	.49
29	15	6.3	7.1	5.5	---	19	11	4.9	3.3	3.1	2.4	.49
30	14	6.4	7.1	5.5	---	18	11	4.9	3.3	2.9	2.2	.49
31	15	---	6.9	5.4	---	18	---	4.9	---	2.8	2.0	---
TOTAL	397.1	249.0	278.4	183.0	205.4	434.4	570	225.6	114.9	116.5	78.2	25.58
MEAN	12.8	8.30	8.98	5.90	7.34	14.0	19.0	7.28	3.83	3.76	2.52	.85
MAX	20	16	12	6.6	10	21	27	10	4.9	6.7	4.0	2.0
MIN	4.6	5.2	6.4	5.4	4.9	7.1	11	4.9	3.3	2.3	1.7	.44
CFSM	1.02	.66	.72	.47	.59	1.12	1.52	.58	.31	.30	.20	.07
IN.	1.18	.74	.83	.54	.61	1.29	1.70	.67	.34	.35	.23	.08

CAL YR 1976 TOTAL 4633.70 MEAN 12.7 MAX 91 MIN 1.7 CFSM 1.02 IN 13.79
WTR YR 1977 TOTAL 2878.08 MEAN 7.89 MAX 27 MIN .44 CFSM .63 IN 8.56

01647740 NORTH BRANCH ROCK CREEK NEAR ROCKVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: September 1967 to September 1977 (discontinued).

REMARKS.--Flow regulated by dam above station; drain valve open at times; variable backwater at times from Rock Creek.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 450 mg/L Nov. 2, 1967; minimum daily mean, 3 mg/L Jan. 24, 1972, Aug. 15, Sept. 10, 1976, many days during 1977.
SEDIMENT LOADS: Maximum daily, 358 tons (325 tonnes) June 22, 1972; minimum daily, 0 ton (0 tonne) July 29, 1971, Sept. 19-30, 1977.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 62 mg/L Mar. 15, 16; minimum daily mean, 3 mg/L on many days during year.
SEDIMENT LOADS: Maximum daily, 3.2 tons (2.9 tonnes) Mar. 15, 16; minimum daily, 0 ton (0 tonne) Sept. 19-30.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9	0.11	6	0.26	5	0.09	6	0.11	4	0.06	6	0.15
2	9	0.29	6	0.26	5	0.09	7	0.12	5	0.07	8	0.19
3	10	0.27	7	0.28	3	0.06	6	0.10	4	0.06	20	0.46
4	7	0.17	7	0.28	3	0.06	7	0.12	4	0.06	9	0.20
5	5	0.11	7	0.25	3	0.05	6	0.10	7	0.10	12	0.25
6	5	0.11	6	0.19	4	0.07	6	0.10	4	0.06	13	0.27
7	4	0.10	6	0.19	4	0.10	7	0.12	3	0.04	14	0.29
8	5	0.16	6	0.18	6	0.19	8	0.13	4	0.05	15	0.32
9	9	0.49	9	0.24	8	0.26	7	0.12	4	0.05	13	0.27
10	10	0.49	7	0.18	8	0.26	5	0.08	5	0.07	13	0.26
11	12	0.52	7	0.15	10	0.32	3	0.05	6	0.11	11	0.22
12	10	0.38	7	0.13	13	0.42	3	0.05	5	0.12	10	0.19
13	7	0.25	6	0.12	9	0.27	4	0.07	7	0.19	12	0.29
14	6	0.21	5	0.10	13	0.39	4	0.07	8	0.22	29	1.4
15	5	0.16	5	0.10	19	0.56	4	0.07	6	0.16	62	3.2
16	4	0.13	4	0.07	25	0.74	12	0.20	8	0.21	62	3.2
17	3	0.09	5	0.07	26	0.70	10	0.16	5	0.13	53	2.7
18	5	0.14	4	0.06	23	0.61	6	0.10	5	0.12	47	2.4
19	6	0.15	3	0.04	20	0.51	6	0.10	5	0.12	38	1.7
20	11	0.30	3	0.04	20	0.51	4	0.06	5	0.11	29	1.2
21	12	0.52	4	0.06	22	0.56	5	0.08	5	0.10	27	1.1
22	12	0.52	5	0.07	23	0.56	4	0.06	5	0.10	34	1.5
23	9	0.36	6	0.08	25	0.58	4	0.06	5	0.09	39	2.0
24	13	0.49	7	0.10	21	0.46	4	0.06	5	0.09	31	1.7
25	9	0.34	6	0.08	19	0.40	4	0.06	10	0.22	28	1.6
26	7	0.28	6	0.08	21	0.43	4	0.06	8	0.19	26	1.4
27	5	0.22	5	0.07	12	0.24	6	0.09	7	0.17	21	1.1
28	9	0.39	3	0.05	6	0.12	6	0.09	11	0.27	21	1.1
29	8	0.32	3	0.05	6	0.12	6	0.09	---	---	17	0.87
30	6	0.23	4	0.07	7	0.13	5	0.07	---	---	14	0.68
31	6	0.24	---	---	7	0.13	4	0.06	---	---	16	0.78
TOTAL	---	8.54	---	3.90	---	9.99	---	2.81	---	3.34	---	32.99

01647740 NORTH BRANCH ROCK CREEK NEAR ROCKVILLE, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16	0.73	3	0.08	7	0.09	6	0.05	14	0.11	9	0.05
2	15	0.69	11	0.28	8	0.11	6	0.05	10	0.07	9	0.05
3	16	0.73	10	0.25	9	0.10	4	0.03	10	0.06	8	0.04
4	20	0.97	9	0.22	10	0.10	8	0.06	16	0.10	8	0.04
5	20	1.1	8	0.19	16	0.16	7	0.05	17	0.10	8	0.04
6	30	2.0	9	0.21	11	0.12	6	0.05	16	0.09	10	0.04
7	30	2.0	8	0.22	8	0.08	6	0.04	16	0.07	10	0.04
8	24	1.7	10	0.27	10	0.10	8	0.05	18	0.08	10	0.04
9	22	1.6	14	0.35	11	0.11	7	0.05	12	0.06	8	0.02
10	19	1.4	14	0.34	12	0.12	5	0.03	10	0.05	8	0.02
11	17	1.2	13	0.30	9	0.09	6	0.04	13	0.06	8	0.02
12	18	1.2	13	0.29	9	0.09	6	0.04	9	0.05	6	0.01
13	20	1.3	12	0.27	9	0.09	6	0.06	8	0.04	6	0.01
14	18	1.1	12	0.26	11	0.11	7	0.08	10	0.07	6	0.01
15	17	1.0	15	0.31	16	0.16	6	0.06	16	0.17	6	0.01
16	14	0.79	15	0.29	14	0.14	4	0.04	16	0.17	6	0.01
17	11	0.62	14	0.26	12	0.12	3	0.03	14	0.15	6	0.01
18	8	0.43	14	0.26	12	0.12	4	0.07	12	0.11	6	0.01
19	12	0.58	15	0.26	11	0.12	5	0.09	12	0.11	4	.00
20	7	0.32	16	0.27	12	0.13	7	0.12	10	0.08	4	.00
21	6	0.26	12	0.19	9	0.09	8	0.13	10	0.07	4	.00
22	5	0.20	10	0.16	5	0.05	10	0.14	14	0.10	4	.00
23	5	0.20	10	0.15	6	0.06	8	0.11	15	0.10	4	.00
24	3	0.11	9	0.13	6	0.06	10	0.12	13	0.08	4	.00
25	4	0.15	9	0.13	6	0.06	9	0.10	12	0.08	4	.00
26	12	0.42	23	0.34	5	0.05	10	0.11	12	0.08	4	.00
27	12	0.42	15	0.20	5	0.05	8	0.08	11	0.08	4	.00
28	9	0.29	10	0.13	4	0.04	6	0.06	11	0.08	4	.00
29	5	0.15	10	0.13	10	0.09	6	0.05	10	0.06	4	.00
30	4	0.12	6	0.08	9	0.08	8	0.06	10	0.06	4	.00
31	---	---	6	0.08	---	---	14	0.11	10	0.05	---	---
TOTAL	---	23.78	---	6.90	---	2.89	---	2.16	---	2.64	---	0.47

TOTAL LOAD FOR YEAR: 100.41 TONS.

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC

LOCATION.--Lat 38°58'21", long 77°02'25", District of Columbia, Hydrologic Unit 02070010, on left bank 125 ft (38 m) downstream from Sherrill Drive Bridge in Rock Creek Park in Washington, and 7.5 mi (12 km) upstream from mouth.

DRAINAGE AREA.--62.2 mi² (161.1 km²).

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 1432: 1933(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 148.67 ft (45.376 m) above mean sea level.

REMARKS.--Records good. Flow affected by two upstream reservoirs which control flow from about 25 mi² (65 km²), Needwood Lake on Rock Creek since Sept. 1966 and Bernard Frank Lake on North Branch Rock Creek since February 1968. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years, 60.4 ft³/s (1.711 m³/s), 13.19 in/yr (335 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s (354 m³/s) June 22, 1972, gage height, 16.2 ft (4.94 m), from floodmark, from rating curve extended above 5,640 ft³/s (160 m³/s) on basis of contracted-opening measurements at gage heights 13.19 ft (4.020 m) and 16.2 ft (4.94 m); minimum, 0.5 ft³/s (0.014 m³/s) Oct. 1-7, 1930, gage height, 1.04 ft (0.317 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Aug. 8	2045	*1380	39.1	6.23	1.899	Aug. 24	2100	1250	35.4	5.82	1.774

Minimum discharge, 7.5 ft³/s (0.21 m³/s) Sept. 15, 21, 22, 23, 24, 25, 30, gage height, 1.21 ft (0.369 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	58	29	21	24	30	41	31	17	14	83	12
2	233	51	28	27	22	28	176	34	17	13	30	11
3	211	46	27	26	22	27	80	31	16	12	14	11
4	46	43	27	24	24	32	92	45	15	11	13	10
5	35	39	24	26	22	38	285	62	15	12	13	9.9
6	32	38	24	24	20	29	131	88	110	12	22	17
7	31	37	340	28	20	28	94	71	32	12	21	13
8	39	35	69	26	22	27	86	43	17	12	221	9.8
9	313	32	49	27	24	27	80	34	130	17	88	9.9
10	113	32	42	31	46	26	72	31	44	18	58	10
11	84	31	41	29	82	26	67	29	20	54	17	8.9
12	74	31	48	27	71	26	60	28	18	291	17	8.5
13	65	30	38	26	64	506	55	27	18	144	17	8.6
14	51	28	34	26	43	184	52	26	17	20	157	8.6
15	42	28	34	30	37	84	51	24	18	16	46	8.3
16	35	27	34	26	31	72	49	24	17	15	24	13
17	43	27	32	24	28	60	46	24	75	23	20	19
18	35	26	31	26	28	82	45	23	124	134	21	9.5
19	28	26	30	28	27	54	45	24	57	35	16	8.1
20	289	26	38	28	26	67	43	22	22	57	14	13
21	131	26	58	26	24	51	42	21	35	26	13	8.8
22	54	26	30	24	23	343	41	19	40	20	20	7.5
23	45	26	29	24	24	102	39	19	39	17	12	7.7
24	54	24	34	26	96	74	60	19	24	15	352	7.8
25	176	24	28	28	58	64	57	57	17	30	57	7.7
26	276	24	42	28	34	55	43	28	15	48	16	8.6
27	58	32	32	26	32	49	35	21	14	15	14	10
28	49	26	28	26	32	64	37	18	14	13	13	14
29	45	94	28	26	---	52	51	17	64	12	14	9.3
30	43	37	28	24	---	46	32	17	15	27	13	7.8
31	202	---	23	24	---	43	---	17	---	14	12	---
TOTAL	3026	1030	1379	812	1006	2396	2087	974	1076	1159	1448	308.3
MEAN	97.6	34.3	44.5	26.2	35.9	77.3	69.6	31.4	35.9	37.4	46.7	10.3
MAX	313	94	340	31	96	506	285	88	130	291	352	19
MIN	28	24	23	21	20	26	32	17	14	11	12	7.5
CFSM	1.57	.55	.72	.42	.58	1.24	1.12	.51	.58	.60	.75	.17
IN.	1.81	.62	.82	.49	.60	1.43	1.25	.58	.64	.69	.87	.18

CAL YR 1976 TOTAL 24357.7 MEAN 66.6 MAX 1170 MIN 9.9 CFSM 1.07 IN 14.57
WTR YR 1977 TOTAL 16701.3 MEAN 45.8 MAX 506 MIN 7.5 CFSM .74 IN 9.99

01649500 NORTHEAST BRANCH ANACOSTIA RIVER AT RIVERDALE, MD

LOCATION.--Lat 38°57'37", long 76°55'34", Prince Georges County, Hydrologic Unit 02070010, on right bank 200 ft (61 m) downstream from bridge on Riverdale Road, 1.8 mi (2.9 km) downstream from Indian Creek, and 1.8 mi (2.9 km) upstream from confluence with Northwest Branch.

DRAINAGE AREA.--72.8 mi² (188.6 km²).

PERIOD OF RECORD.--August 1938 to current year.

REVISED RECORDS.--WDR MD-DE-75-1: 1972(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 12.68 ft (3.865 m) above mean sea level (Washington Suburban Sanitary Commission bench mark). Prior to June 12, 1942, nonrecording gage; June 12, 1942, to Mar. 22, 1966, and Apr. 12, 1967, to Sept. 3, 1969, water-stage recorder, all at bridge at datum 14.00 ft (4.267 m) above mean sea level. Mar. 23, 1966, to Apr. 11, 1967, nonrecording gage 600 ft (183 m) downstream from bridge at datum 9.25 ft (2.819 m) above mean sea level.

REMARKS.--Records good. Some regulation at low flow by sand and gravel plants above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 82.7 ft³/s (2.342 m³/s), 15.42 in/yr (392 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) June 22, 1972, gage height, 9.52 ft (2.902 m), from rating curve extended above 3,800 ft³/s (108 m³/s) on basis of the average of contracted-opening and slope-area measurements at gage height 9.52 ft (2.902 m); maximum gage height, 12.93 ft (3.941 m) Oct. 16, 1942; minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Sept. 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 23 or 24, 1933, reached a stage of about 15.5 ft (4.72 m), at datum 14.00 ft (4.267 m) above mean sea level, from floodmarks, discharge, 10,500 ft³/s (297 m³/s), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of velocity-area study.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 20	1915	2310	65.4	5.37	1.637
Oct. 25	2245	*4050	115	6.99	2.131
July 12	1845	2370	67.1	5.44	1.65

Minimum daily discharge, 10 ft³/s (0.28 m³/s) Sept. 13-15, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	215	43	38	32	41	40	32	19	21	33	28
2	365	92	39	38	32	36	236	39	19	20	22	16
3	407	71	46	38	32	33	169	33	15	18	16	14
4	107	64	40	40	40	40	126	56	12	17	15	13
5	54	54	40	38	36	46	362	66	14	16	21	15
6	42	52	38	38	34	37	191	249	96	15	17	13
7	38	50	620	38	34	33	89	175	38	16	20	13
8	39	48	214	40	34	31	69	68	22	17	99	14
9	390	48	83	38	34	29	59	40	159	19	68	18
10	124	47	61	44	70	28	53	35	57	40	50	22
11	54	43	63	40	80	27	50	33	28	142	27	15
12	41	43	72	38	72	27	48	30	22	341	20	11
13	39	45	60	36	74	438	45	29	20	141	19	10
14	36	43	51	38	55	237	43	27	19	34	52	10
15	33	43	46	50	47	87	40	24	21	22	30	10
16	32	42	49	46	44	62	39	22	21	17	17	14
17	50	42	49	40	46	50	38	22	87	95	17	22
18	37	42	44	38	41	95	34	22	67	173	16	16
19	33	40	43	38	35	75	33	26	38	33	14	12
20	552	39	61	40	35	72	32	24	34	41	14	11
21	389	38	74	36	37	60	32	22	47	25	12	11
22	102	38	79	34	38	585	34	21	28	22	16	10
23	60	36	54	34	37	274	33	18	25	19	12	11
24	89	35	49	34	147	103	122	20	24	16	251	12
25	478	36	53	40	129	68	106	55	25	32	70	12
26	915	36	91	38	63	60	56	35	26	36	29	13
27	172	48	58	38	57	54	40	26	23	18	22	17
28	83	42	45	36	51	63	40	22	29	14	18	17
29	66	153	45	36	---	61	56	19	28	14	14	14
30	72	62	42	36	---	52	35	17	23	32	42	12
31	629	---	40	34	---	45	---	17	---	19	34	---
TOTAL	5623	1687	2392	1190	1466	2949	2350	1324	1086	1485	1107	426
MEAN	181	56.2	77.2	38.4	52.4	95.1	78.3	42.7	36.2	47.9	35.7	14.2
MAX	915	215	620	50	147	585	362	249	159	341	251	28
MIN	32	35	38	34	32	27	32	17	12	14	12	10
CFSM	2.49	.77	1.06	.53	.72	1.31	1.08	.59	.50	.66	.49	.20
IN.	2.87	.86	1.22	.61	.75	1.51	1.20	.68	.55	.76	.57	.22

CAL YR 1976 TOTAL 36225 MEAN 99.0 MAX 2320 MIN 14 CFSM 1.36 IN 18.51
WTR YR 1977 TOTAL 23085 MEAN 63.2 MAX 915 MIN 10 CFSM .87 IN 11.80

01650500 NORTHWEST BRANCH ANACOSTIA RIVER NEAR COLESVILLE, MD

LOCATION.--Lat 39°03'55", long 77°01'48", Montgomery County, Hydrologic Unit 02070010, on right bank 400 ft (120 m) upstream from bridge on State Highway 183, 1.5 mi (2.4 km) southwest of Colesville, 3 mi (4.8 km) upstream from Burnt Mills, 10 mi (16.1 km) upstream from Sligo Creek, and 12.5 mi (20.1 km) upstream from confluence with Northeast Branch.

DRAINAGE AREA.--21.1 mi² (54.6 km²).

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1924(M), 1925-26, 1929-30(M), 1933(M), 1939(P), 1940(M), 1943-46, 1948-49(P). WSP 1903: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 264.85 ft (80.726 m) above mean sea level, adjustment of 1912. Prior to Apr. 22, 1932, nonrecording gages in same general vicinity at different datums. Apr. 22, 1932, to Apr. 11, 1934, nonrecording gages at present site and datum.

REMARKS.--Records good. Diversions at low flow since 1962 for irrigation of golf courses above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years, 22.3 ft³/s (0.632 m³/s), 14.35 in/yr (364 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) June 22, 1972, gage height, 15.89 ft (4.843 m), from high-water mark in well, from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of contracted-opening and flow-over-road measurement at gage height 10.99 ft (3.350 m) and computation of flow over Burnt Mills Dam, 3 miles (4.8 km) downstream, adjusted for flow from intervening area, at gage height 15.89 ft (4.843 m); no flow several days during August and September 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 588 ft³/s (16.7 m³/s) Mar. 22, gage height, 5.58 ft (1.701 m), no peak above base of 600 ft³/s (17 m³/s); minimum, 1.0 ft³/s (0.028 m³/s) Sept. 15, gage height, 1.43 ft (0.436 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	24	13	9.8	7.5	13	13	11	6.6	2.8	3.4	3.2
2	68	18	12	9.7	7.5	12	71	10	6.1	2.3	2.7	2.7
3	90	16	12	10	7.5	11	32	9.9	5.2	2.0	1.9	2.7
4	20	15	11	11	9.0	14	48	13	4.6	1.8	1.9	3.0
5	13	14	11	10	8.0	16	153	15	4.7	2.1	1.9	2.5
6	11	14	10	9.5	8.0	13	51	34	13	1.9	2.0	2.2
7	9.9	13	140	10	8.0	12	26	27	7.4	1.8	1.9	2.0
8	12	12	30	11	8.0	11	21	15	5.7	2.0	7.2	1.7
9	133	12	18	9.5	8.0	11	18	11	26	1.7	4.4	1.8
10	30	12	16	12	75	11	17	11	9.3	1.8	6.4	2.5
11	15	12	16	11	105	10	17	9.7	6.0	9.7	9.0	1.8
12	13	12	19	10	72	10	16	9.5	5.2	30	3.8	1.5
13	11	12	15	9.5	47	199	15	8.9	4.9	15	2.8	1.4
14	10	11	14	9.0	23	60	14	9.1	4.7	4.6	87	1.2
15	9.3	11	15	12	19	24	14	8.3	5.3	3.4	16	1.3
16	9.1	11	16	11	12	18	13	8.2	4.8	2.7	7.6	2.5
17	11	11	15	9.6	11	15	13	7.8	5.0	14	5.8	3.2
18	9.9	12	14	8.5	9.0	25	13	7.3	11	49	6.2	2.2
19	8.8	11	14	8.5	9.6	19	13	7.2	5.9	5.9	4.4	1.7
20	113	11	17	10	9.7	21	12	6.9	6.1	7.9	4.1	1.8
21	49	11	18	9.0	9.5	19	12	6.5	9.6	4.7	4.1	1.3
22	18	11	12	8.5	9.5	176	12	6.2	4.6	3.2	4.4	1.2
23	14	11	13	8.5	9.6	41	11	6.1	4.1	2.4	3.5	1.4
24	20	11	13	8.0	56	20	14	6.3	3.8	2.2	32	1.8
25	50	11	12	9.5	36	18	16	12	3.7	5.1	12	1.8
26	103	11	15	9.0	18	16	12	8.7	4.3	5.4	4.8	2.5
27	21	13	12	9.0	16	15	11	7.0	3.1	2.4	4.4	2.9
28	17	12	13	8.5	16	19	12	6.3	3.8	2.0	4.1	3.2
29	15	28	12	8.5	---	17	14	5.7	7.2	1.9	3.5	2.0
30	15	15	12	8.5	---	15	11	5.6	3.5	4.3	3.0	1.5
31	77	---	11	8.0	---	14	---	6.1	---	2.7	4.8	---
TOTAL	1021.0	398	571	296.6	634.4	895	715	316.3	195.2	198.7	261.0	62.5
MEAN	32.9	13.3	18.4	9.57	22.7	28.9	23.8	10.2	6.51	6.41	8.42	2.08
MAX	133	28	140	12	105	199	153	34	26	49	87	3.2
MIN	8.8	11	10	8.0	7.5	10	11	5.6	3.1	1.7	1.9	1.2
CFSM	1.56	.63	.87	.45	1.08	1.37	1.13	.48	.31	.30	.40	.10
IN.	1.80	.70	1.01	.52	1.12	1.58	1.26	.56	.34	.35	.46	.11

CAL YR 1976 TOTAL 8439.7 MEAN 23.1 MAX 538 MIN 2.1 CFSM 1.10 IN 14.88
WTR YR 1977 TOTAL 5564.7 MEAN 15.2 MAX 199 MIN 1.2 CFSM .72 IN 9.81

01651000 NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE, MD

LOCATION.--Lat 38°57'09", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on right bank at downstream side of bridge on Queens Chapel Road (State Highway 500), 0.8 mi (1.3 km) downstream from Sligo Branch, 1 mi (1.6 km) west of Hyattsville, and 1.6 mi (2.6 km) upstream from confluence with Northeast Branch.

DRAINAGE AREA.--49.4 mi^2 (127.9 km^2).

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for July 1938 published in WSP 1302.

REVISED RECORDS.--WSP 971: 1942(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 17.30 ft (5.273 m) above mean sea level, adjustment of 1912. Prior to Oct. 22, 1938, nonrecording gage; Oct. 22, 1938, to Sept. 17, 1951, water-stage recorder; Sept. 17, 1951, to Aug. 29, 1952, nonrecording gage and crest-stage gage.

REMARKS.--Records fair. Small diversion since 1962 for irrigation of golf courses above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 44.5 ft^3/s (1.260 m^3/s), 12.23 in/yr (311 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft^3/s (510 m^3/s) June 22, 1972, gage height, 14.47 ft (4.410 m), from rating curve extended above 4,000 ft^3/s (113 m^3/s) on the basis of the average of slope-area and step-back-water measurements at gage height 14.47 ft (4.410 m); minimum, 0.2 ft^3/s (0.006 m^3/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	2130	*3620	103	5.36	1.634	Aug. 8	2115	2490	70.5	4.50	1.372
July 12	1915	3120	88.4	4.99	1.521						

Minimum daily discharge, 5.0 ft^3/s (0.14 m^3/s) Sept. 14, 15, 24, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	54	26	21	17	24	29	22	15	8.6	57	7.8
2	271	39	22	20	17	23	181	22	14	7.7	19	6.7
3	236	35	26	20	17	23	74	22	13	7.3	8.3	5.2
4	49	32	22	21	24	26	83	26	12	7.0	6.8	5.1
5	29	29	22	20	32	30	274	24	12	6.9	18	5.2
6	24	28	22	20	40	24	105	124	106	7.2	8.2	7.0
7	21	27	240	22	24	23	49	80	27	7.2	25	6.1
8	24	26	53	21	20	22	43	32	16	6.5	190	5.1
9	314	25	38	20	19	22	37	22	132	9.6	85	6.4
10	69	25	30	24	42	21	36	20	40	32	43	7.5
11	30	25	30	22	80	21	37	19	16	132	17	5.2
12	24	25	38	20	85	21	36	20	12	272	10	5.2
13	23	25	30	20	69	407	36	20	10	65	9.4	5.1
14	20	25	24	20	46	150	36	20	10	15	80	5.0
15	17	25	24	24	35	52	34	20	10	9.9	40	5.0
16	22	25	25	22	30	37	34	18	10	8.5	15	6.4
17	30	25	25	19	27	31	34	18	95	52	11	14
18	33	23	23	20	24	57	32	17	59	122	9.4	6.9
19	22	22	23	22	21	43	32	16	26	18	8.6	5.2
20	325	22	43	22	20	52	32	17	19	33	8.5	5.1
21	153	22	58	20	20	39	30	17	26	16	8.0	5.1
22	39	22	37	19	21	388	31	15	13	10	12	5.1
23	30	22	28	19	22	85	29	15	10	8.2	7.3	5.1
24	45	22	26	19	116	45	104	15	11	7.3	90	5.0
25	367	22	26	22	80	36	50	52	9.5	30	75	5.1
26	286	22	60	20	30	34	28	25	10	26	12	5.1
27	56	34	36	20	28	31	24	17	9.3	10	8.8	6.5
28	41	22	24	20	26	46	27	15	11	7.1	7.9	8.8
29	35	104	22	20	---	42	23	14	18	6.2	7.0	5.4
30	39	38	22	18	---	33	22	13	11	18	6.7	5.0
31	325	---	22	18	---	31	---	13	---	10	5.8	---
TOTAL	3072	892	1147	635	1032	1919	1622	790	782.8	976.2	909.7	181.4
MEAN	99.1	29.7	37.0	20.5	36.9	61.9	54.1	25.5	26.1	31.5	29.3	6.05
MAX	367	104	240	24	116	407	274	124	132	272	190	14
MIN	17	22	22	18	17	21	22	13	9.3	6.2	5.8	5.0
CFSM	2.01	.60	.75	.42	.75	1.25	1.10	.52	.53	.64	.59	.12
IN.	2.31	.67	.86	.48	.78	1.45	1.22	.59	.59	.74	.69	.14

CAL YR 1976 TOTAL 20795.0 MEAN 56.8 MAX 1200 MIN 5.0 CFSM 1.15 IN 15.66
WTR YR 1977 TOTAL 13959.1 MEAN 38.2 MAX 407 MIN 5.0 CFSM .77 IN 10.51

01653500 HENSON CREEK AT OXON HILL, MD

LOCATION.--Lat 38°47'16", long 76°58'42", Prince Georges County, Hydrologic Unit 02070010, on left bank 100 ft (30 m) downstream from bridge on Tucker Road, 1.0 mi (1.6 km) south of Oxon Hill, and 1.4 mi (2.3 km) upstream from Carey Branch and mouth.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

PERIOD OF RECORD.--June 1948 to current year.

REVISED RECORDS.--WSP 1232: 1949(M), 1950.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 62 ft (18.9 m), from topographic map.

REMARKS.--Records good. Some diversion above station for irrigation of truck farm. Some regulation at low flow by sand and gravel plant above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 19.3 ft³/s (0.547 m³/s), 15.70 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,440 ft³/s (97.4 m³/s) Aug. 4, 1971, gage height, 7.63 ft (2.326 m), from rating curve extended above 520 ft³/s (14.7 m³/s) on basis of slope-area measurement at gage heights 6.63 ft (2.021 m) and 7.27 ft (2.216 m); no flow at times during some summer months in 1954, 1955, 1957, 1962-64, and 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 2	1815	569	16.1	3.56	[illegible]	June 17	2230	471	13.3	3.21	0.978
Oct. 20	2015	526	14.9	3.41	1.039	July 12	1945	529	15.0	3.42	1.042
Oct. 26	0230	*766	21.7	4.16	1.268	Aug. 24	1715	630	17.8	3.76	1.146
Dec. 7	0930	471	13.3	3.21	0.978	Aug. 30	1900	695	19.7	3.97	1.210

Minimum discharge, 0.38 ft³/s (0.011 m³/s) July 29, Aug. 12, 19, 20, 23, 24, gage height, 0.31 ft (0.094 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	18	7.7	5.8	7.2	6.2	9.0	5.6	2.4	1.3	22	2.9
2	148	12	7.5	5.0	9.3	5.8	42	7.5	2.0	1.5	6.8	2.1
3	47	11	6.4	4.5	13	5.8	17	7.9	1.6	1.2	2.1	1.7
4	12	10	7.3	5.7	11	7.2	21	22	1.7	1.0	1.4	1.6
5	8.8	9.0	7.4	6.0	9.3	6.4	55	19	2.3	.95	1.8	11
6	7.2	9.0	6.1	6.2	7.0	5.9	19	36	4.7	.56	4.2	4.3
7	6.2	8.5	150	7.0	5.7	5.4	14	22	3.4	.77	1.6	2.2
8	5.8	7.1	19	6.6	5.2	4.6	13	10	1.3	1.1	1.9	1.6
9	85	7.3	9.7	6.0	5.7	5.0	12	6.2	22	11	6.8	2.9
10	12	7.6	8.3	14	11	5.4	11	5.4	5.5	2.7	2.3	4.4
11	7.2	7.1	12	10	11	5.1	10	4.9	2.6	19	3.6	1.6
12	6.4	9.8	13	8.0	11	5.7	9.8	5.1	2.2	79	.87	1.2
13	5.9	9.2	7.5	8.0	12	45	9.7	4.5	1.8	20	3.0	.84
14	5.2	7.9	6.2	14	8.9	17	9.4	4.4	1.7	4.2	18	.77
15	4.8	6.9	6.6	45	7.5	7.7	8.9	3.9	2.0	2.2	4.6	.80
16	4.9	6.4	6.9	17	6.5	6.3	9.4	3.5	2.0	1.5	1.7	1.1
17	11	6.7	7.3	7.2	6.3	5.7	8.9	2.8	44	2.0	1.3	5.5
18	6.3	7.1	6.4	7.0	7.3	12	8.0	3.0	50	5.2	.93	1.9
19	4.8	7.4	6.0	8.3	6.3	7.7	7.0	7.2	6.7	1.4	.69	1.4
20	158	8.3	11	9.3	6.2	12	7.2	4.0	53	2.3	.66	1.4
21	41	8.3	15	7.2	5.8	7.1	7.0	3.3	14	2.6	.91	1.1
22	11	7.3	6.5	6.7	5.3	123	6.4	3.0	4.1	1.8	.93	.90
23	9.0	5.8	6.3	5.2	6.1	24	6.0	2.8	2.9	.58	.54	1.1
24	14	6.0	6.3	7.2	38	15	13	2.2	2.3	.82	131	1.2
25	46	7.0	5.7	15	17	12	17	11	2.7	1.9	13	1.4
26	215	6.1	24	19	9.0	12	12	4.7	2.9	4.3	4.4	1.8
27	20	8.7	7.6	11	8.8	12	6.6	2.8	2.0	.64	3.3	1.4
28	13	7.0	6.9	20	7.8	12	6.2	2.2	1.4	.47	3.3	1.1
29	11	31	7.5	21	---	11	10	2.6	1.3	.45	3.5	.83
30	14	10	6.0	7.2	---	9.8	6.4	2.5	1.1	1.9	59	.73
31	119	---	5.7	7.7	---	9.2	---	2.7	---	1.4	8.6	---
TOTAL	1072.5	273.5	409.8	327.8	265.2	429.0	391.9	224.7	247.6	175.74	314.73	62.77
MEAN	34.6	9.12	13.2	10.6	9.47	13.8	13.1	7.25	8.25	5.67	10.2	2.09
MAX	215	31	150	45	38	123	55	36	53	79	131	11
MIN	4.8	5.8	5.7	4.5	5.2	4.6	6.0	2.2	1.1	.45	.54	.73
CFSM	2.07	.55	.79	.64	.57	.83	.78	.43	.49	.34	.61	.13
IN.	2.39	.61	.91	.73	.59	.96	.87	.50	.55	.39	.70	.14

CAL YR 1976 TOTAL 6506.12 MEAN 17.8 MAX 415 MIN .20 CFSM 1.07 IN 14.49
WTR YR 1977 TOTAL 4195.24 MEAN 11.5 MAX 215 MIN .45 CFSM .69 IN 9.34

01653600 PISCATAWAY CREEK AT PISCATAWAY, MD

LOCATION.--Lat 38°42'20", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on left bank 75 ft (23 m) downstream from bridge on State Highway 223, at Piscataway, 0.4 mi (0.6 km) upstream from Tinker Creek, and 4.8 mi (7.7 km) upstream from mouth.

DRAINAGE AREA.--39.5 mi^2 (102.3 km^2).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 46.1 ft^3/s (1.306 m^3/s), 15.85 in/yr (403 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft^3/s (142 m^3/s) Sept. 26, 1975, gage height, 10.48 ft (3.194 m), from rating curve extended above 1,700 ft^3/s (48.1 m^3/s) on basis of contracted-opening measurement of peak flow at bridge 100 ft (30 m) upstream; no flow at times in 1966, 1970, and 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 338 ft^3/s (9.57 m^3/s) Oct. 26, gage height 5 [illegible] ft (1.585 m), no peak above base of 450 ft^3/s (12 m^3/s); no flow many days in July, August, and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	73	21	20	14	23	21	13	4.1	.43	.97	
2	61	46	20	19	14	21	50	12	3.4	.23	1.4	
3	128	40	17	20	17	20	55	21	2.5	.04	1.4	
4	36	35	16	23	21	22	39	21	1.7	.00	.59	
5	20	31	16	22	25	23	88	25	1.5	.00	.25	
6	15	28	16	21	20	20	68	28	2.4	.00	.00	
7	13	26	163	23	14	20	40	76	3.2	.00	.00	
8	12	25	126	21	13	18	35	31	2.3	.23	.00	
9	111	23	48	20	13	17	31	18	13	.63	.00	
10	51	23	38	29	15	17	30	15	16	2.8	.00	
11	23	21	37	28	32	17	29	13	5.7	2.8	.00	
12	18	23	45	21	35	17	27	12	3.6	29	.00	
13	16	26	36	16	41	33	26	11	2.4	46	.00	
14	14	23	27	20	31	41	24	9.2	2.0	7.0	1.9	
15	12	22	28	39	26	25	22	8.1	2.5	3.0	7.4	
16	11	21	28	39	21	21	22	7.2	2.5	1.8	1.6	
17	15	20	31	24	17	18	20	6.7	9.9	1.1	.67	
18	19	20	25	19	17	21	19	6.1	75	16	.29	
19	12	19	23	18	18	23	18	5.6	12	4.0	.02	
20	85	18	27	19	19	25	17	8.0	15	1.6	.00	
21	200	18	50	18	17	24	17	5.8	30	1.8	.00	
22	45	18	28	17	16	80	16	4.9	8.4	11	.00	
23	28	16	26	16	18	120	15	4.4	5.0	1.8	.00	
24	27	16	22	18	35	60	16	4.1	3.8	.99	.00	
25	44	16	22	20	60	40	40	9.0	3.3	.35	6.0	
26	261	16	55	22	34	30	28	11	3.4	2.7	2.0	
27	68	17	39	21	30	28	19	6.0	2.6	1.3	.36	
28	43	18	31	22	29	26	16	4.5	2.0	.39	.01	
29	35	47	31	28	---	26	18	3.6	1.3	.24	.00	
30	31	34	25	17	---	26	15	3.5	.74	.00	.00	
31	194	---	22	15	---	25	---	3.9	---	.01	.00	
TOTAL	1681	779	1139	675	662	927	881	407.6	241.24	137.24	24.86	0
MEAN	54.2	26.0	36.7	21.8	23.6	29.9	29.4	13.1	8.04	4.43	.80	0
MAX	261	7	163	39	60	120	88	76	75	46	7.4	0
MIN	11	16	16	15	13	17	15	3.5	.74	.00	.00	0
CFSM	1.37	.66	.93	.55	.60	.76	.74	.33	.20	.11	.02	0
IN.	1.58	.73	1.07	.64	.62	.87	.83	.38	.23	.13	.02	0

CAL YR 1976 TOTAL 15961.05 MEAN 43.6 MAX 840 MIN .00 CFSM 1.10 IN 15.03
WTR YR 1977 TOTAL 7554.94 MEAN 20.7 MAX 261 MIN .00 CFSM .52 IN 7.11

01661050 ST. CLEMENT CREEK NEAR CLEMENTS, MD

LOCATION.--Lat 38°28'00", long 76°43'31", St. Marys County, Hydrologic Unit 02070011, on left bank 60 ft (18 m) downstream from bridge on State Highway 242, 0.5 mi (0.8 km) north of Clements, 2.3 mi (3.7 km) upstream from mouth, and 5.7 mi (9.2 km) northwest of Leonardtown.

DRAINAGE AREA.--18.5 mi² (47.9 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8 ft (2.4 m), from topographic map.

REMARKS.--Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 20.0 ft³/s (0.598 m³/s), 14.68 in/yr (393 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,350 ft³/s (123 m³/s) June 22, 1972, gage height, 6.55 ft (1.996 m), from rating curve extended above 480 ft³/s (13.6 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; no flow for part of Sept. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 164 ft³/s (4.6 m³/s) Mar. 22, gage height, 2.90 ft (0.884 m), no peak above base of 220 ft³/s (6.2 m³/s); no flow for part of Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	34	14	8.6	9.1	14	9.8	7.8	3.8	2.6	.80	.40
2	40	18	12	9.3	9.1	12	10	8.8	3.6	2.5	1.2	.30
3	50	16	11	9.1	9.5	10	12	15	7.0	2.5	.96	.14
4	26	14	10	9.9	12	11	20	9.5	4.0	2.4	.77	.10
5	14	12	9.5	11	14	12	36	36	3.4	2.3	.46	.04
6	8.0	11	9.5	10	14	11	22	29	8.0	2.2	.40	.03
7	7.0	10	77	10	8.5	11	14	59	26	2.1	.35	1.8
8	6.5	9.0	55	11	7.0	9.7	12	15	9.0	2.0	.35	2.1
9	19	9.0	22	12	7.5	9.2	11	9.4	7.0	2.0	.30	2.6
10	18	9.0	18	20	10	8.5	11	7.5	6.0	3.0	.30	6.1
11	12	10	17	26	13	8.5	11	6.5	5.0	12	.20	1.9
12	9.0	13	16	17	16	8.5	11	6.0	4.0	30	.20	.77
13	7.0	18	15	14	22	11	10	5.0	3.6	45	.30	.46
14	5.5	15	13	13	17	12	10	4.2	3.4	6.9	1.6	.32
15	5.1	13	12	38	15	10	10	3.8	3.4	2.4	6.0	.30
16	4.8	11	11	36	12	9.0	10	3.6	3.3	1.7	2.6	.30
17	10	10	12	20	9.2	8.0	9.1	3.4	2.9	1.5	1.4	1.2
18	15	9.5	11	14	8.5	9.0	8.7	3.4	69	1.4	1.2	1.7
19	8.4	9.3	10	10	11	11	8.9	3.4	31	1.4	1.1	.77
20	41	8.5	13	10	12	14	8.7	3.6	15	1.3	1.0	.46
21	54	8.3	29	10	11	14	8.2	3.2	19	3.0	.90	.35
22	17	8.3	14	9.5	9.7	90	8.1	3.0	6.1	11	.90	.23
23	11	8.3	14	9.8	11	62	7.8	3.0	4.0	2.8	.80	.34
24	11	8.1	11	11	19	24	8.2	3.0	3.5	1.2	6.0	.36
25	17	7.9	9.9	13	27	18	24	18	4.0	1.1	10	.36
26	92	8.0	32	14	16	15	14	26	5.1	2.8	2.3	.31
27	30	8.5	22	14	17	13	9.8	10	4.0	1.8	.86	.31
28	16	9.0	17	16	23	13	8.3	5.0	2.8	1.3	.77	.23
29	14	92	16	22	---	12	11	3.6	2.7	1.0	.70	.14
30	13	35	13	12	---	12	8.9	3.6	2.6	.90	.60	.12
31	58	---	12	9.6	---	11	---	3.6	---	.80	.50	---
TOTAL	699.3	452.7	557.9	449.8	370.1	493.4	363.5	321.9	272.2	154.10	45.82	24.54
MEAN	22.6	15.1	18.0	14.5	13.2	15.9	12.1	10.4	9.07	4.97	1.48	.82
MAX	92	92	77	38	27	90	36	59	69	45	10	6.1
MIN	4.8	7.9	9.5	8.6	7.0	8.0	7.8	3.0	2.6	.80	.20	.03
CFSM	1.22	.82	.97	.78	.71	.86	.65	.56	.49	.27	.08	.04
IN.	1.41	.91	1.12	.90	.74	.99	.73	.65	.55	.31	.09	.05

CAL YR 1976 TOTAL 6916.72 MEAN 18.9 MAX 308 MIN .13 CFSM 1.02 IN 13.91
WTR YR 1977 TOTAL 4205.26 MEAN 11.5 MAX 92 MIN .03 CFSM .62 IN 8.46

01661500 ST. MARYS RIVER AT GREAT MILLS, MD

LOCATION.--Lat 38°14'36", long 76°30'13", St. Marys County, Hydrologic Unit 02070011, on left bank at downstream side of bridge on State Highway 471 in Great Mills, 0.3 mi (0.5 km) downstream from Western Branch, and 12.0 mi (19.3 km) upstream from mouth.

DRAINAGE AREA.--24.0 mi² (62.2 km²).

PERIOD OF RECORD.--June 1946 to current year.

REVISED RECORDS.--WSP 1702: 1946, 1948-49, 1955, 1957-58.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 22.7 ft³/s (0.643 m³/s), 12.84 in/yr (326 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,950 ft³/s (225 m³/s) Aug. 20, 1969, gage height, 13.34 ft (4.066 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening measurement at gage height 12.08 ft (3.682 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 7, 1966, gage height, 1.13 ft (0.344 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 265 ft³/s (7.50 m³/s) June 18, gage height, 3.50 ft (1.067 m), no peak above base of 400 ft³/s (11 m³/s); minimum, 1.0 ft³/s (0.028 m³/s) Aug. 10, 11, 12, gage height, 1.22 ft (0.372 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	34	20	12	11	21	11	6.9	3.8	3.0	1.8	1.5
2	101	22	17	10	11	16	11	6.9	3.7	2.7	2.6	1.4
3	113	17	14	10	12	14	13	12	7.4	2.2	2.1	1.3
4	54	15	12	12	14	14	20	12	4.3	2.1	2.1	1.2
5	23	14	11	12	16	16	54	28	3.6	2.1	1.7	1.3
6	13	13	11	12	12	14	47	17	12	2.0	1.5	1.3
7	10	12	58	13	10	13	26	23	27	1.8	1.5	2.1
8	9.1	11	83	12	8.9	12	19	15	7.3	1.7	1.3	2.2
9	26	10	42	11	9.5	11	15	10	6.8	1.6	1.1	6.6
10	23	10	26	49	12	11	13	7.9	6.8	1.7	1.2	14
11	14	9.7	22	57	14	11	13	7.2	4.8	12	1.1	4.5
12	11	13	21	24	14	11	12	6.4	3.9	19	1.4	2.9
13	9.6	16	19	21	18	13	11	5.0	3.4	11	2.8	2.3
14	8.4	14	15	20	16	15	11	4.2	3.0	4.7	5.3	2.0
15	7.6	13	15	91	14	12	10	3.7	3.1	3.2	14	1.8
16	7.1	12	15	54	14	11	9.7	3.5	3.3	2.7	4.8	2.0
17	10	11	16	25	12	10	9.2	3.3	6.7	2.2	3.1	2.8
18	14	11	14	14	11	12	8.8	3.3	109	2.0	3.0	3.5
19	11	11	13	12	12	14	8.6	3.2	27	1.6	2.9	3.0
20	64	10	14	12	12	18	8.3	3.6	9.6	1.5	2.6	2.5
21	127	9.9	24	12	12	18	8.1	3.2	9.2	1.7	2.3	2.1
22	48	9.7	17	11	11	70	8.1	3.0	5.5	3.3	2.2	2.2
23	23	9.1	15	13	12	92	7.8	2.9	4.1	2.9	2.1	2.1
24	16	9.1	13	12	14	44	8.0	2.9	3.5	2.4	3.1	2.1
25	18	9.5	12	15	23	25	11	17	3.4	2.0	6.8	2.1
26	131	9.5	25	16	18	18	11	25	3.6	2.7	3.7	2.1
27	75	9.8	22	16	20	15	9.0	9.1	3.1	2.2	2.9	1.9
28	35	11	19	18	30	14	7.9	5.0	4.1	1.8	2.4	1.8
29	20	46	18	20	---	14	7.9	3.7	5.7	1.6	2.0	1.6
30	16	32	16	13	---	14	7.6	3.6	3.6	1.6	1.8	1.6
31	41	---	14	12	---	13	---	3.7	---	1.6	1.6	---
TOTAL	1210.8	434.3	653	641	393.4	606	417.0	261.2	302.3	104.8	88.7	79.8
MEAN	39.1	14.5	21.1	20.7	14.1	19.5	13.9	8.43	10.1	3.38	2.86	2.66
MAX	132	46	83	91	30	92	54	28	109	19	14	14
MIN	7.1	9.1	11	10	8.9	10	7.6	2.9	3.0	1.5	1.1	1.2
CFSM	1.63	.60	.88	.86	.59	.81	.58	.35	.42	.14	.12	.11
IN.	1.88	.67	1.01	.99	.61	.94	.65	.40	.47	.16	.14	.12

CAL YR 1976 TOTAL 8402.4 MEAN 23.0 MAX 341 MIN 1.9 CFSM .96 IN 13.02
WTR YR 1977 TOTAL 5192.3 MEAN 14.2 MAX 132 MIN 1.1 CFSM .59 IN 8.05

MONONGAHELA RIVER BASIN

03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD

LOCATION.--Lat 39°25'19", long 79°25'32", Garrett County, Hydrologic Unit 05020006, on left bank 200 ft (61 m) downstream from Baltimore and Ohio Railroad bridge, 250 ft (76 m) downstream from Little Youghiogheny River, 1.2 mi (1.9 km) northwest of Oakland, and 1.5 mi (2.4 km) upstream from Dunkard Lick Run.

DRAINAGE AREA.--134 mi^2 (347 km^2).

PERIOD OF RECORD.--August 1941 to current year.

REVISED RECORDS.--WSP 1113: 1947(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,353.61 ft (717.380 m) above mean sea level. Prior to Aug. 1, 1946, nonrecording gage at bridge 200 ft (61 m) upstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Town of Oakland diverted an average of 0.4 ft^3/s (0.011 m^3/s) for water supply. The diversion is returned above station as sewage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 290 ft^3/s (8.213 m^3/s), 29.39 in/yr (747 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft^3/s (334 m^3/s) Oct. 16, 1954, gage height, 12.16 ft (3.706 m); minimum daily, 2.5 ft^3/s (0.071 m^3/s) Oct. 4, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 15.3 ft (4.66 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 10	0145	2300	65.1	5.77	1.759	Mar. 5	0130	2760	78.2	6.21	1.893
Feb. 25	1330	*3110	88.1	6.53	1.990	Apr. 5	1030	2480	70.2	5.94	1.811

Minimum discharge, 23 ft^3/s (0.65 m^3/s) Sept. 13, 14, gage height 2.00 ft (0.610 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	301	909	181	89	50	871	267	146	46	76	63	52
2	263	671	166	90	50	582	492	136	44	72	53	43
3	270	504	138	85	50	442	661	128	59	57	45	71
4	172	406	139	82	50	1440	596	121	44	49	39	51
5	114	319	122	80	52	2280	2100	208	37	47	36	40
6	84	262	110	76	52	1320	1320	322	40	52	33	37
7	71	220	1110	74	48	866	904	802	52	51	52	36
8	146	197	1010	70	44	607	814	649	44	53	267	33
9	1360	169	564	68	44	492	613	455	267	63	228	33
10	2010	269	401	66	48	470	486	347	396	74	125	29
11	925	300	402	64	97	436	395	274	156	49	334	27
12	494	245	523	62	143	434	314	219	105	154	215	25
13	341	216	521	60	421	1320	259	185	83	437	240	24
14	263	191	387	60	531	982	222	328	78	277	345	29
15	200	181	332	60	446	669	191	208	114	151	405	46
16	185	176	286	60	329	508	162	162	74	107	237	44
17	154	151	245	58	275	393	143	136	61	84	239	80
18	126	148	198	58	231	510	129	120	100	86	253	56
19	106	140	168	58	205	567	117	266	74	64	158	41
20	126	129	187	58	184	463	258	189	63	51	124	103
21	576	120	189	56	161	424	592	138	131	47	102	88
22	381	115	157	54	158	776	275	115	77	57	99	51
23	282	100	162	54	320	881	204	103	58	45	89	42
24	326	102	131	54	680	714	185	99	50	36	83	36
25	813	105	123	54	1970	526	174	88	117	179	104	33
26	1240	162	126	52	1900	421	146	80	182	595	67	71
27	784	280	117	52	1770	345	180	68	95	205	56	95
28	525	247	129	52	1510	447	150	60	86	123	49	186
29	391	220	122	52	---	444	227	56	155	95	45	111
30	313	188	105	52	---	359	169	51	97	115	43	89
31	798	---	100	50	---	324	---	48	---	81	83	---
TOTAL	14140	7442	8651	1960	11819	21313	12745	6307	2985	3632	4311	1702
MEAN	456	248	279	63.2	422	688	425	203	99.5	117	139	56.7
MAX	2010	909	1110	90	1970	2280	2100	802	396	595	405	186
MIN	71	100	100	50	44	324	117	48	37	36	33	24
CFSM	3.40	1.85	2.08	.47	3.15	5.13	3.17	1.52	.74	.87	1.04	.42
IN.	3.93	2.07	2.40	.54	3.28	5.92	3.54	1.75	.83	1.01	1.20	.47

CAL YR 1976 TOTAL 94830 MEAN 259 MAX 3110 MIN 13 CFSM 1.93 IN 26.33
WTR YR 1977 TOTAL 97007 MEAN 266 MAX 2280 MIN 24 CFSM 1.99 IN 26.93

03076000 DEEP CREEK RESERVOIR NEAR OAKLAND, MD

LOCATION.--Lat 39°30'34", long 79°23'28", Garrett County, Hydrologic Unit 05020006, on Deep Creek at dam, 1.8 mi (2.9 km) upstream from mouth and 7.0 mi (11.3 km) north of Oakland.

DRAINAGE AREA.--64.7 mi^2 (167.6 km^2).

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1950, monthend contents published in WSP 1305, and October 1950 to September 1955, monthend contents published in WSP 1385.

GAGE.--Water-stage recorder at right end of spillway. Datum of gage is at mean sea level, unadjusted.

REMARKS.--Reservoir is formed by an earthfill dam completed January 1925, with storage beginning at that time. Usable capacity, 92,975 acre-ft (115 hm^3) between elevations 2,425 ft (739.1 m), top of intake to outlet tunnel, and 2,462 ft (750.4 m), crest of spillway. Dead storage, 13,085 acre-ft (16.1 hm^3). Figures given herein represent usable contents. Reservoir is used for hydroelectric power.

COOPERATION.--Elevations and capacity table furnished by Pennsylvania Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,258 acre-ft (115 hm^3) July 24, 25, 1949, elevation, 2,462.075 ft (750.440 m); minimum observed, 11,763 acre-ft (14.5 hm^3) Sept. 30, 1925, elevation, 2,433.45 ft (741.716 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 87,800 acre-ft (108 hm^3) Apr. 11, elevation, 2,460.60 ft (749.991 m); minimum, 64,300 acre-ft (79.3 hm^3) Feb. 23, elevation, 2,454.00 ft (747.979 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2455.3	68700	
Oct. 31	2456.8	73900	+5200
Nov. 30	2456.2	71800	-2100
Dec. 31	2455.6	69800	-2000
CAL YR 1976			+700
Jan. 31	2454.8	67000	-2800
Feb. 28	2455.5	69400	+2400
Mar. 31	2459.3	83000	+13600
Apr. 30	2460.3	[illegible]700	+3700
May 31	2460.4	87000	+300
June 30	2459.9	85200	-1800
July 31	2458.7	80800	-4400
Aug. 31	2457.4	76100	-4700
Sept. 30	2456.3	72200	-3900
WTR YR 1977			+3500

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi (1.1 km) upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi (2.4 km) upstream from Bear Creek.

DRAINAGE AREA.--295 mi² (764 km²).

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft (453.338 m) above mean sea level. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mi (1.1 km) downstream at datum 16.24 ft (4.950 m) and 16.29 ft (4.965 m) lower, respectively.

REMARKS.--Records good except those for winter periods and period of no gage-height record, Jan. 17 to Feb. 15, which are fair to poor.. Low and medium flow regulated since July 1925 by Deep Creek Reservoir (see station 03076000). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years (water years 1899-1904, 1941-77), 636 ft³/s (18.01 m³/s), 29.28 in/yr (744 mm/yr), adjusted for storage since October 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Oct. 16, 1954, gage height, 8.99 ft (2.740 m), from rating curve extended above 5,800 ft³/s (164 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 8.2 ft³/s (0.23 m³/s) Sept. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1898, 14.2 ft (4.33 m) Mar. 29, 1924, from floodmarks, site and datum then in use or 10.2 ft (3.11 m), present site and datum; discharge, about 15,600 ft³/s (440 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,910 ft³/s (139 m³/s) Mar. 4, gage height, 5.66 ft (1.725 m); minimum, 41 ft³/s (1.16 m³/s) Sept. 13, gage height, 2.01 ft (0.613 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	453	1900	465	180	165	1890	572	255	169	204	200	274
2	383	1430	487	160	170	1240	971	317	159	120	178	227
3	307	1120	460	205	170	961	1450	319	144	93	169	98
4	349	952	260	210	170	2580	1220	286	127	77	154	99
5	235	765	225	235	105	3960	2990	487	73	197	222	73
6	233	510	355	245	90	2650	2640	593	161	246	71	143
7	214	416	1710	240	145	1830	1790	1300	161	185	68	142
8	320	528	2190	215	160	1290	1660	1130	155	205	506	139
9	2010	569	1220	125	155	1050	1080	878	299	132	546	132
10	3260	624	950	180	165	1000	857	698	695	168	376	60
11	1920	731	690	195	330	863	908	578	284	186	476	47
12	1020	625	837	200	525	748	786	493	181	316	486	106
13	725	424	1160	200	740	2160	688	430	211	959	324	123
14	581	360	891	205	1050	2010	532	423	205	708	313	128
15	524	472	799	120	965	1290	489	370	257	423	623	142
16	349	496	721	105	750	988	357	361	226	201	418	157
17	304	587	619	120	640	773	282	326	185	153	684	121
18	341	459	395	170	595	994	335	336	172	292	619	115
19	345	461	340	185	400	1120	361	493	166	281	393	201
20	380	271	512	195	355	864	305	472	191	156	245	145
21	1040	252	604	185	425	898	766	270	340	241	202	233
22	860	397	488	120	440	1390	487	228	272	257	290	171
23	497	402	503	96	775	1820	325	283	220	99	277	144
24	573	374	270	155	1970	1390	277	282	184	79	242	67
25	1460	226	230	200	4020	1030	350	265	114	271	278	56
26	2290	407	240	190	3340	766	328	252	282	1120	225	203
27	1620	375	415	160	3140	605	346	235	261	474	120	263
28	1130	394	425	160	2980	853	402	131	209	322	99	380
29	897	576	439	110	---	973	462	112	279	258	264	308
30	588	521	440	92	---	783	311	109	250	204	240	237
31	1280	---	410	150	---	646	---	169	---	170	243	---
TOTAL	26488	17624	19750	5308	24935	41415	24327	12881	6632	8797	9551	4734
MEAN	854	587	637	171	891	1336	811	416	221	284	308	158
MAX	3260	1900	2190	245	4020	3960	2990	1300	695	1120	684	380
MIN	214	226	225	92	90	605	277	109	73	77	68	47
(≠)	+84.7	-35.3	-32.5	-45.5	+43.2	+221	+62.0	+4.9	-30.3	-71.6	-76.6	-65.5
MEAN≠	939	552	604	126	934	1557	873	421	191	212	231	92.5
CFSM≠	3.18	1.87	2.05	.43	3.17	5.28	2.96	1.43	.65	.72	.78	.31
IN≠	3.67	2.09	2.36	.50	3.30	6.09	3.30	1.65	.72	.83	.90	.35

CAL YR 1976 TOTAL 199284 MEAN 544 MAX 4570 MIN 26 MEAN≠ 545 CFSM≠ 1.85 IN≠ 25.15
WTR YR 1977 TOTAL 202442 MEAN 555 MAX 4020 MIN 47 MEAN≠ 560 CFSM≠ 1.90 IN≠ 25.77

≠ Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

≠ Adjusted for change in contents.

03076600 BEAR CREEK AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'22", long 79°23'41", Garrett County, Hydrologic Unit 05020006, on right bank 0.2 mi (0.3 km) downstream from bridge on Accident-Friendsville Road, 0.6 mi (1.0 km) downstream from South Branch Bear Creek, 0.8 mi (1.3 km) southeast of Friendsville, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--48.9 mi² (126.7 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,551.34 ft (472.848 m) above mean sea level.

REMARKS.--Records good except those for winter periods, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 82.6 ft³/s (2.339 m³/s), 22.94 in/yr (583 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,650 ft³/s (132 m³/s) Sept. 14, 1971, gage height, 9.6 ft (2.93 m), from floodmarks, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.5 ft³/s (0.042 m³/s) Sept. 12, 1966, gage height, 0.42 ft (0.128 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1200	814	23.1	3.67	1.119
Feb. 24	1815	*1380	39.1	4.58	1.396
Mar. 4	2000	1120	31.7	4.16	1.268
Apr. 2	1330	681	19.3	3.47	1.058
July 13	0545	770	21.8	3.60	1.097
Aug. 17	1300	840	23.8	3.71	1.131

Minimum discharge, 7.4 ft³/s (0.21 m³/s) Aug. 5, gage height, 0.86 ft (0.262 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	246	37	28	13	290	114	39	20	12	11	22
2	32	202	36	28	13	177	341	39	18	12	9.9	19
3	24	148	35	27	13	127	433	39	19	11	9.9	22
4	19	116	34	27	13	661	339	38	16	10	8.0	17
5	16	92	33	26	14	733	413	86	16	10	9.0	14
6	15	77	32	25	13	445	345	125	31	10	8.3	14
7	15	67	332	24	13	311	270	243	22	14	11	13
8	35	60	296	23	12	215	234	168	18	15	15	12
9	486	53	176	22	12	150	164	123	44	11	13	11
10	439	61	122	21	13	137	135	92	47	10	9.1	11
11	253	57	107	20	28	124	111	75	29	9.5	9.1	9.4
12	134	52	104	19	113	128	91	61	24	29	15	8.7
13	93	48	94	18	175	413	81	54	22	215	13	8.5
14	72	46	83	18	120	334	73	50	23	65	16	15
15	58	46	80	18	91	255	65	45	29	39	15	13
16	57	44	75	18	77	175	57	40	21	31	12	15
17	46	40	69	17	70	128	51	37	18	26	260	22
18	39	40	59	17	66	283	47	35	36	21	109	13
19	35	40	52	17	58	313	44	91	25	18	57	11
20	43	37	56	17	47	263	42	56	25	16	42	12
21	87	36	52	16	42	194	38	47	33	15	33	11
22	76	35	44	16	49	329	37	42	23	17	45	10
23	67	32	50	15	155	369	34	39	20	13	31	9.2
24	101	29	44	15	854	291	39	37	18	12	28	8.7
25	210	31	47	15	792	206	38	33	20	23	25	9.1
26	297	35	47	15	584	144	35	32	21	27	20	52
27	220	40	41	15	558	115	34	27	17	16	18	43
28	139	39	39	14	438	212	37	26	15	12	16	45
29	106	38	36	14	---	229	52	24	16	11	15	36
30	86	31	31	14	---	177	42	23	13	22	32	29
31	196	---	30	14	---	140	---	21	---	13	33	---
TOTAL	3557	1918	2373	593	4446	8068	3836	1887	699	765.5	948.3	535.6
MEAN	115	63.9	76.5	19.1	159	260	128	60.9	23.3	24.7	30.6	17.9
MAX	486	246	332	28	854	733	433	243	47	215	260	52
MIN	15	29	30	14	12	115	34	21	13	9.5	8.0	8.5
CFSM	2.35	1.31	1.56	.39	3.25	5.32	2.62	1.25	.48	.51	.63	.37
IN.	2.71	1.46	1.81	.45	3.38	6.14	2.92	1.44	.53	.58	.72	.41

CAL YR 1976 TOTAL 27912.7 MEAN 76.3 MAX 883 MIN 6.0 CFSM 1.56 IN 21.23
WTR YR 1977 TOTAL 29626.4 MEAN 81.2 MAX 854 MIN 8.0 CFSM 1.66 IN 22.54

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, Hydrologic Unit 05020006, on left bank at downstream side of highway bridge, 0.3 mi (0.5 km) upstream from Slaubaugh Run, 0.7 mi (1.1 km) downstream from U.S. Highway 40, and 1.0 mi (1.6 km) northeast of Grantsville.

DRAINAGE AREA.--62.5 mi² (161.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1947 to current year.

REVISED RECORDS.--WSP 1143: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,088.97 ft (636.718 m) above mean sea level.

REMARKS.--Water-discharge records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--30 years, 116 ft³/s (3.285 m³/s), 25.21 in/yr (640 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s (238 m³/s) Oct. 15, 1954, gage height, 10.70 ft (3.261 m), from rating curve extended above 1,600 ft³/s (73.6 m³/s) on basis of contracted-opening measurement at gage height 8.13 ft (2.478 m); no flow Aug. 31, 1962, result of regulation from unknown source.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1400	*1610	45.6	4.45	1.356	Mar. 4	1730	1510	42.8	4.34	1.323
Feb. 24	2115	1340	37.9	*a4.46	1.359	Mar. 13	1130	1030	29.2	3.71	1.131

a Ice jam.

Minimum discharge, 7.6 ft³/s (0.22 m³/s) Aug. 5, 6, 7, gage height, 1.06 ft (0.323 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	350	52	38	20	307	137	43	20	13	12	16
2	95	218	50	38	20	217	469	42	18	12	11	15
3	70	176	44	36	20	180	436	42	20	11	9.4	30
4	50	154	46	36	20	861	280	44	16	9.4	8.8	18
5	37	137	45	35	21	877	508	150	16	9.4	8.2	14
6	30	122	43	33	20	515	338	153	67	8.8	8.4	14
7	31	103	485	32	19	348	273	243	37	12	11	13
8	144	87	292	31	18	249	266	146	25	18	15	12
9	1040	81	151	30	18	218	198	106	72	13	13	12
10	626	105	130	28	19	213	166	87	106	11	11	12
11	264	110	146	27	45	194	145	76	48	9.4	11	10
12	168	88	184	26	170	193	123	65	34	39	20	9.4
13	129	77	153	25	260	715	107	60	27	282	19	8.8
14	105	71	110	24	170	425	96	60	32	94	18	12
15	88	70	100	24	130	285	86	51	62	40	52	15
16	106	67	94	24	115	225	77	46	37	27	31	25
17	82	62	87	23	105	179	70	42	28	31	400	37
18	69	62	77	23	95	427	65	39	62	20	159	20
19	60	60	72	23	85	368	60	83	40	17	59	14
20	131	59	84	23	70	275	56	57	32	13	40	14
21	326	54	76	23	65	246	55	43	55	24	32	14
22	166	52	60	23	70	475	50	37	38	31	65	12
23	118	46	65	22	300	419	47	34	28	15	44	11
24	235	44	62	22	700	317	50	34	22	11	34	10
25	370	48	58	22	929	229	49	31	22	19	31	11
26	357	61	56	22	679	191	45	29	25	39	24	76
27	213	92	56	22	630	165	46	25	20	20	20	65
28	159	75	52	21	508	358	50	23	17	14	18	65
29	134	73	50	21	---	296	98	22	17	11	16	40
30	120	52	46	21	---	201	59	20	15	26	19	30
31	363	---	45	21	---	166	---	21	---	17	26	---
TOTAL	6086	2856	3071	819	5321	10334	4505	1954	1058	917.0	1245.8	655.2
MEAN	196	95.2	99.1	26.4	190	333	150	63.0	35.3	29.6	40.2	21.8
MAX	1040	350	485	38	929	877	508	243	106	282	400	76
MIN	30	44	43	21	18	165	45	20	15	8.8	8.2	8.8
CFSM	3.14	1.52	1.59	.42	3.04	5.33	2.40	1.01	.57	.47	.64	.35
IN.	3.62	1.70	1.83	.49	3.17	6.15	2.68	1.16	.63	.55	.74	.39

CAL YR 1976 TOTAL 36302.1 MEAN 99.2 MAX 1040 MIN 3.7 CFSM 1.59 IN 21.61
WTR YR 1977 TOTAL 38822.0 MEAN 106 MAX 1040 MIN 8.2 CFSM 1.70 IN 23.11

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	AIR TEMPER- ATURE (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)
OCT									
06...	1020	31	--	--	20.0	12.5	--	--	--
NOV									
15...	1300	67	105	6.7	5.0	3.0	--	--	--
30...	1135	47	--	--	-10.0	.0	--	--	--
JAN									
13...	1130	25	--	--	-4.5	.0	--	--	--
FEB									
04...	1200	20	--	--	-.5	.0	--	--	--
MAR									
28...	1455	556	--	--	15.0	8.5	--	--	--
MAY									
17...	1330	42	--	--	27.0	19.0	--	--	--
JUN									
27...	1420	20	130	8.0	26.5	24.5	--	--	--
JUL									
21...	1510	11	140	8.0	27.5	29.5	6	50	34
AUG									
15...	1125	19	180	7.6	23.5	22.0	--	--	--
SEP									
12...	1345	8.8	--	--	18.0	20.0	--	--	--

DATE	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SILICA (SIO2) (MG/L)
OCT									
06...	--	--	--	--	--	--	--	--	--
NOV									
15...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
JAN									
13...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
MAR									
28...	--	--	--	--	--	--	--	--	--
MAY									
17...	--	--	--	--	--	--	--	--	--
JUN									
27...	--	--	--	--	--	--	--	--	--
JUL									
21...	14	3.7	3.3	1.3	20	31	6.0	.1	3.0
AUG									
15...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT								
06...	--	--	--	--	--	--	--	--
NOV								
15...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
JAN								
13...	--	--	--	--	--	--	--	--
FEB								
04...	--	--	--	--	--	--	--	--
MAR								
28...	--	--	--	--	--	--	--	--
MAY								
17...	--	--	--	--	--	--	--	--
JUN								
27...	--	--	--	--	--	--	--	--
JUL								
21...	77	72	.11	.00	390	130	120	10
AUG								
15...	--	--	--	--	--	--	--	--
SEP								
12...	--	--	--	--	--	--	--	--

SUSQUEHANNA RIVER BASIN

01580200 - DEER CREEK NEAR KALMIA, MD. (LAT 39 37 16 LONG 076 17 57)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
06...	1300	117	16.5	--
29...	1135	141	5.0	10.5
NOV				
24...	1445	95	2.5	4.0
MAR , 1977				
03...	1325	100	5.0	9.0
23...	1350	367	7.0	10.0
MAY , 1977				
03...	1325	147	17.0	20.0
JUN				
01...	1535	111	19.0	24.0
SEP				
01...	1025	211	22.0	24.0

BUSH RIVER BASIN

01581700 - WINTERS RUN NEAR BENSON, MD. (LAT 39 31 12 LONG 076 22 24)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
06...	0945	41	15.5	17.0
29...	1440	44	8.0	12.5
NOV				
24...	1110	32	2.0	4.5
FEB , 1977				
10...	1240	25	.0	12.0
MAR				
03...	1105	28	3.5	12.0
23...	1105	91	6.0	15.0
MAY , 1977				
03...	1045	39	16.0	19.0
JUN				
01...	1310	33	18.0	27.0
13...	1022	25	19.0	25.0
JUL				
27...	1236	16	19.0	25.0
SEP				
06...	1100	13	23.0	30.0

GUNPOWDER RIVER BASIN

01582000 - LITTLE FALLS AT BLUE MOUNT, MD. (LAT 39 36 16 LONG 076 37 16)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
12...	1500	53	11.0	14.0
NOV				
19...	1140	39	3.5	8.5
FEB , 1977				
02...	1017	25	.0	-5.0
14...	1055	54	.0	10.0
24...	1310	37	2.0	10.0
MAR				
29...	1425	67	14.0	28.0
MAY , 1977				
02...	1110	60	14.0	23.0
JUN				
14...	1545	38	18.5	19.5
29...	1120	55	20.0	24.5
AUG				
29...	1005	25	22.0	22.0

01583000 - SLADE RUN NEAR GLYNDON, MD. (LAT 39 29 40 LONG 076 47 45)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
NOV , 1976				
16...	1005	1.8	4.0	4.0
DEC				
27...	1040	1.7	.5	-4.5
FEB , 1977				
02...	1355	1.5	1.0	3.0
MAR , 1977				
25...	1030	2.5	5.5	5.0
JUN				
13...	1005	1.3	18.0	24.0
JUL				
18...	1035	1.0	24.0	29.5

01583500 - WESTERN RUN AT WESTERN RUN, MD. (LAT 39 30 38 LONG 076 40 37)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
12...	1245	58	12.0	13.0
NOV				
18...	1500	45	6.0	9.0
JAN , 1977				
05...	1405	44	.5	-.5
FEB				
02...	1155	33	.0	-6.0
14...	1518	61	.5	1.0
24...	1435	42	5.5	8.5
MAR				
29...	1055	68	11.0	20.0
MAY , 1977				
02...	1450	60	17.0	19.0
JUN				
14...	1225	39	19.0	20.0
29...	1445	48	24.0	26.0
AUG				
25...	1020	25	18.5	17.0
SEP				
23...	1230	20	18.0	20.5

01584050 - LONG GREEN CREEK AT GLEN ARM, MD. (LAT 39 27 17 LONG 076 28 45.01)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
07...	1606	7.6	18.0	20.0
29...	1655	9.2	10.0	9.0
NOV				
30...	1535	6.8	3.0	-3.0
DEC				
30...	1325	6.5	1.5	-4.0
FEB , 1977				
10...	1545	7.0	3.0	6.5
MAR , 1977				
28...	1250	11	9.5	9.0
MAY				
12...	1345	7.3	15.0	23.0
JUL				
27...	1010	3.9	18.5	22.0
AUG				
29...	1430	3.2	24.0	30.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

GUNPOWDER RIVER BASIN--CONTINUED

01585100 - WHITEMARSH RUN AT WHITE MARSH, MD. (LAT 39 22 15 LONG 076 26 46)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976 05...	1045	5.8	16.0	16.0	MAR , 1977 28...	0945	5.9	9.0	9.0
NOV 19...	1450	3.3	11.0	19.5	MAY 05...	1545	3.8	26.0	29.0
DEC 27...	1055	5.1	1.0	-3.5	JUN 22...	1410	1.0	24.0	24.0
FEB , 1977 08...	1205	1.8	.0	1.0	AUG 31...	0950	6.5	25.0	28.0

BACK RIVER BASIN

01585200 - WEST BRANCH HERRING RUN AT IDLEWYLDE, MD. (LAT 39 22 25 LONG 076 35 35)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
NOV , 1976 16...	0945	.65	4.5	7.0	MAY , 1977 12...	1100	.60	15.0	28.0

01585300 - STEMMERS RUN AT ROSSVILLE, MD. (LAT 39 20 28 LONG 076 29 17)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976 04...	1240	3.9	19.0	18.0	MAR , 1977 25...	0955	2.8	5.0	5.0
NOV 15...	1115	1.4	6.0	6.5	MAY 05...	1055	1.5	18.0	23.0
FEB , 1977 07...	1130	.77	1.0	-2.5	JUN 22...	1015	.51	24.0	27.0

01585400 - BRIEN RUN AT STEMMERS RUN, MD. (LAT 39 20 01 LONG 076 28 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976 04...	1540	1.3	18.5	20.0	MAR , 1977 24...	1515	1.1	11.0	8.5
NOV 15...	1420	.60	8.5	8.5	MAY 05...	1320	.60	[illegible]	26.0
DEC 27...	1550	.72	3.0	-3.0	JUN 22...	1205	.41	18.0	24.0
FEB , 1977 08...	1555	1.0	.0	2.0					

PATAPSCO RIVER BASIN

01585500 - CRANBERRY BRANCH NEAR WESTMINSTER, MD. (LAT 39 35 35 LONG 076 58 05)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976 04...	1140	.80	15.0	16.5	MAR , 1977 25...	1310	4.0	6.5	7.0
NOV 19...	0950	2.6	4.5	10.0	MAY 09...	1402	2.7	10.0	4.0
DEC 27...	1330	2.5	1.0	-4.0	JUN 13...	1440	1.9	19.0	27.5
FEB , 1977 10...	1055	1.8	8.0	1.0	JUL 18...	1300	1.6	22.5	32.0

01586000 - NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD. (LAT 39 30 00 LONG 076 53 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976 04...	1450	66	16.0	25.0	MAR , 1977 25...	1445	82	6.5	7.0
NOV 19...	1155	41	4.0	17.0	JUN 13...	1155	31	19.0	23.5
DEC 27...	1530	39	.5	-2.0	JUL 18...	1535	32	27.0	31.0
FEB , 1977 10...	1340	27	1.0	12.0					

01589100 - E. BR. HERBERT RUN AT ARBUTUS, MD. (LAT 39 14 24 LONG 076 41 33)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976 13...	1525	1.4	16.0	18.0	MAY , 1977 10...	1515	1.3	14.0	17.0
NOV 11...	1310	1.4	8.0	9.0	AUG 30...	1010	.54	24.0	26.0
JAN , 1977 04...	1355	1.1	1.0	4.0	SEP 30...	1115	.50	17.0	18.5
MAR 31...	1330	1.3	16.5	17.0					

PATAPSCO RIVER BASIN--CONTINUED

01589300 - GWYNNS FALLS AT VILLA NOVA, MD. (LAT 39 20 45 LONG 076 44 01)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAR , 1977				
14...	1302	22	13.0	14.0	31...	1110	25	16.0	15.0
NOV					MAY				
17...	1215	18	4.0	6.0	09...	1120	21	13.0	9.0
FEB , 1977					AUG				
04...	1140	16	.5	3.0	30...	1455	11	28.0	32.0
15...	1550	27	1.0	1.0					

01589330 - DEAD RUN AT FRANKLINTOWN, MD. (LAT 39 18 40 LONG 076 43 02)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					AUG , 1977				
14...	1536	1.8	14.0	14.0	30...	1205	.70	25.5	29.0
NOV					SEP				
11...	1550	1.8	6.0	6.5	30...	1240	.60	17.0	22.0
FEB , 1977									
15...	1315	1.9	4.5	4.5					

01589440 - JONES FALLS AT SORRENTO, MD. (LAT 39 23 30 LONG 076 39 42)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
JUN , 1977					JUN , 1977				
20...	1425	14	21.0	23.5	29...	1625	21	23.0	24.5

PATUXENT RIVER BASIN

01590500 - BACON RIDGE BRANCH AT CHESTERFIELD, MD. (LAT 39 00 07 LONG 076 36 53)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
07...	1705	5.7	17.0	20.0	03...	1055	6.0	15.0	17.0
NOV					JUN				
26...	1105	5.3	4.5	12.0	14...	1135	2.8	15.0	18.0
MAR , 1977					JUL				
29...	1030	8.2	12.0	22.0	[illegible]...	1320	2.2	19.5	22.0

01591000 - PATUXENT RIVER NEAR UNITY, MD. (LAT 39 14 18 LONG 077 03 23)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUL , 1977				
14...	1515	27	12.5	15.5	19...	1445	11	24.5	31.0
NOV					AUG				
30...	1340	27	2.0	-3.5	26...	1505	7.4	18.0	25.0
DEC					29...	1145	7.9	21.0	27.5
28...	1100	23	.5	1.5	SEP				
MAR , 1977					30...	1450	5.6	16.0	19.0
31...	1125	34	14.5	14.5					
JUN									
17...	1050	16	19.0	23.5					

01592500 - PATUXENT RIVER NEAR LAUREL, MD. (LAT 39 06 56 LONG 076 52 27)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUN , 1977				
12...	1230	13	16.0	16.0	21...	1100	24	15.0	22.0
APR , 1977					AUG				
04...	1300	243	7.5	6.5	01...	1200	26	18.0	27.5
MAY					29...	1510	15	21.5	32.5
11...	1130	28	13.0	15.0					

01593500 - LITTLE PATUXENT RIVER AT GUILFORD, MD. (LAT 39 10 04 LONG 076 51 07)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUN , 1977				
04...	1100	61	20.0	16.0	13...	1025	13	18.0	21.0
NOV					JUL				
12...	1015	26	5.0	3.0	18...	1450	59	28.0	30.0
DEC					AUG				
27...	1045	27	1.0	-.5	01...	1450	58	28.0	30.0
MAR , 1977					22...	1040	16	21.0	23.0
24...	1250	52	7.5	7.0					
MAY									
02...	1050	24	16.5	22.0					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PATUXENT RIVER BASIN--CONTINUED

01594000 - LITTLE PATUXENT RIVER AT SAVAGE, MD. (LAT 39 08 00 LONG 076 48 58)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
04...	1345	141	17.5	20.0
NOV				
12...	1220	70	5.0	3.0
DEC				
27...	1320	78	.5	-2.0
MAR , 1977				
24...	1130	150	7.0	5.5
MAY , 1977				
02...	1300	66	17.0	21.5
JUN				
13...	1230	38	20.0	24.0
AUG				
01...	1015	23	24.0	27.5

POTOMAC RIVER BASIN

01595000 - NORTH BRANCH POTOMAC RIVER AT STEYER, MD. (LAT 39 18 07 LONG 079 18 26)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
05...	1620	101	14.5	17.0
NOV				
26...	1105	94	.5	.0
JAN , 1977				
20...	1500	40	.0	-6.5
FEB				
16...	1440	106	.0	-9.0
APR				
07...	1300	409	4.0	2.0
MAY , 1977				
16...	1450	68	17.0	24.5
JUL				
06...	0945	48	22.0	25.0
29...	1045	29	20.0	22.5
SEP				
09...	1040	19	18.0	20.0
09...	1220	15	18.0	22.0

01595500 - N B POTOMAC R AT KITZMILLER, MD. (LAT 39 23 38 LONG 079 10 55)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
01...	0910	674	12.0	11.5
NOV				
01...	0935	1090	6.0	3.0
DEC				
01...	0940	222	.0	-9.0
JAN , 1977				
03...	0920	145	.0	-3.0
26...	1310	84	.0	-2.5
MAR				
01...	0945	1390	2.5	2.0
APR				
01...	0900	507	8.5	8.0
MAY , 1977				
02...	1000	149	13.0	16.0
17...	0735	163	14.0	11.0
31...	1025	107	18.5	16.0
JUL				
01...	0850	81	20.5	19.5
06...	1140	55	26.0	30.5
AUG				
01...	0945	47	21.5	20.5
02...	1125	38	22.0	23.0
SEP				
01...	0905	45	20.5	20.0

01596500 - SAVAGE RIVER NEAR BARTON, MD. (LAT 39 34 05 LONG 079 06 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
05...	1240	24	11.0	18.0
NOV				
15...	1040	38	2.0	[illegible]
30...	1040	24	.0	-11.5
FEB , 1977				
11...	1435	13	.5	11.0
APR				
04...	1255	246	7.0	4.5
MAY				
17...	1030	21	11.0	20.0
JUN , 1977				
27...	1130	9.2	18.0	21.0
JUL				
29...	1140	4.1	17.0	18.0
AUG				
29...	1340	4.2	22.0	27.5
SEP				
12...	1150	1.8	11.0	11.0

01597000 - CRABTREE CREEK NEAR SWANTON, MD. (LAT 39 30 00 LONG 079 09 35)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
05...	1405	12	12.0	18.0
NOV				
15...	0955	22	3.0	2.0
30...	1000	--	.0	-10.0
JAN , 1977				
28...	1220	5.1	.5	3.5
APR				
04...	1105	76	7.5	4.5
MAY				
17...	1145	13	12.0	21.0
JUN , 1977				
27...	1000	5.0	15.5	18.5
JUL				
20...	1155	2.8	21.0	28.5
29...	1035	3.8	15.0	16.0
AUG				
29...	1225	1.8	19.0	27.5
SEP				
12...	1025	1.3	11.0	9.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

POTOMAC RIVER BASIN--CONTINUED

01597500 - SAVAGE R, BELOW SAVAGE R DAM, NR BLOOMINGTON, M (LAT 39 30 05 LONG 079 07 25)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
01...	1245	71	14.0	13.5
12...	1145	862	14.0	12.0
JAN , 1977				
03...	1020	38	2.0	--
28...	1045	25	2.0	2.0
APR				
01...	1055	106	6.5	11.0
07...	1005	1170	7.5	6.0
MAY , 1977				
02...	1310	16	9.0	20.0
JUL				
01...	1000	16	10.0	20.5
AUG				
01...	1045	52	9.0	22.0
SEP				
01...	1105	42	12.0	26.0

01598500 - NORTH BRANCH POTOMAC RIVER AT LUKE MD. (LAT 39 28 45 LONG 079 03 55)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
01...	1315	953	12.7	--
12...	1430	2070	12.6	17.5
NOV				
01...	1320	1420	6.8	--
DEC				
01...	1200	--	.0	-5.0
JAN , 1977				
03...	1350	--	.0	-1.5
MAR				
01...	1505	2820	3.5	2.0
APR				
01...	1125	711	10.0	13.0
05...	1055	5080	7.5	10.0
MAY , 1977				
02...	1510	209	16.0	20.0
31...	1220	139	21.0	17.0
JUN				
30...	1305	134	24.0	28.0
JUL				
01...	1015	107	22.5	--
AUG				
01...	1110	102	23.5	23.5
SEP				
01...	1130	102	24.5	26.5

01599000 - GEORGES CREEK AT FRANKLIN, MD. (LAT 39 29 38 LONG 079 02 42)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
01...	1030	190	12.5	14.0
NOV				
01...	1025	175	6.5	5.5
DEC				
01...	1250	36	.0	-3.0
MAR , 1977				
03...	1050	123	1.5	3.0
MAY , 1977				
02...	1030	42	13.5	18.5
31...	1330	19	19.0	21.0
JUN				
30...	1510	11	25.0	30.5
AUG				
01...	0955	5.9	21.0	22.0
29...	1100	5.0	22.0	26.5

01601500 - WILLS CREEK NEAR CUMBERLAND, MD. (LAT 39 40 07 LONG 078 47 18)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
21...	0945	1010	10.0	7.0
NOV				
16...	1110	160	3.0	3.0
JAN , 1977				
07...	1430	105	1.0	-3.0
FEB				
08...	1440	58	.0	-3.0
APR				
04...	1200	1390	7.5	5.0
MAY , 1977				
19...	1350	190	18.5	22.0
JUL				
05...	0935	30	19.5	25.0
AUG				
08...	0900	24	20.5	26.5
SEP				
12...	1125	16	15.0	17.0

01603500 - EVITTS CR NR CENTERVILLE, PA. (LAT 39 47 23 LONG 078 38 48)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
04...	1240	43	12.5	16.0
NOV				
16...	0905	24	2.0	-3.0
30...	1315	--	.0	-8.0
JAN , 1977				
07...	1240	12	.5	-3.0
FEB				
08...	1205	7.2	.0	-4.0
17...	1210	18	.0	-6.0
MAR				
18...	1355	198	7.0	12.5
MAR , 1977				
22...	1325	220	6.0	5.0
MAY				
19...	1120	28	15.5	21.0
JUL				
05...	1105	4.1	19.5	24.0
AUG				
31...	1540	5.8	23.0	25.5
SEP				
02...	1015	4.6	19.5	23.0
23...	0935	3.8	14.5	13.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

POTOMAC RIVER BASIN--CONTINUED

01609000 - TOWN CREEK NEAR OLDTOWN, MD. (LAT 39 33 12 LONG 078 33 19)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
04...	1035	315	14.0	16.0
NOV				
16...	1430	89	3.0	5.0
JAN , 1977				
11...	1310	35	.0	-6.5
FEB				
09...	1400	18	.0	5.0
MAR				
14...	1415	946	8.0	12.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
APR , 1977				
22...	1510	85	21.0	25.5
MAY				
19...	0930	50	20.0	23.0
JUL				
05...	1355	6.3	25.5	29.5
AUG				
10...	1110	10	25.0	26.0
SEP				
28...	0925	14	17.0	12.0

01610000 - POTOMAC RIVER AT PAW PAW, W. VA. (LAT 39 32 13 LONG 078 27 28.01)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
22...	1035	7820	8.5	6.5
DEC				
23...	1130	1690	.0	1.0
FEB , 1977				
02...	1410	752	.0	.0
23...	1225	1540	3.0	22.0
MAR				
23...	1110	12200	6.0	2.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
JUN , 1977				
23...	0855	597	21.0	14.0
JUL				
07...	1000	335	28.5	27.5
AUG				
23...	1450	346	25.0	27.0
31...	1305	351	28.0	27.0
SEP				
22...	1005	303	19.5	17.0

01610155 - SIDELING HILL CREEK NEAR BELLEGROVE, MD. (LAT 39 38 58 LONG 078 20 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
SEP , 1977				
28...	1150	5.6	17.0	18.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
SEP , 1977				
29...	0935	17	14.0	9.5

01617800 - MARSH RUN AT GRIMES, MD. (LAT 39 30 53 LONG 077 46 38)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
08...	1100	25	15.0	18.0
10...	1550	57	14.0	14.0
NOV				
18...	1425	20	8.0	10.0
JAN , 1977				
04...	1050	12	5.0	2.5
27...	1100	9.7	2.0	.0
FEB				
21...	1000	9.0	2.0	-2.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
APR , 1977				
11...	1050	27	11.5	22.5
MAY				
27...	1110	12	15.0	24.0
JUL				
12...	0935	8.3	20.5	25.5
AUG				
22...	1120	22	19.5	28.5
SEP				
07...	1410	5.7	19.5	23.0

01618000 - POTOMAC RIVER AT SHEPHERDSTOWN, W. VA. (LAT 39 26 04 LONG 077 48 07)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
12...	1400	29800	15.0	18.0
14...	1205	14300	12.0	16.5
JAN , 1977				
21...	1415	--	.0	-1.0
FEB				
24...	1300	2520	2.5	12.0
MAR				
15...	1200	38300	10.5	18.0
APR				
11...	1115	12800	10.5	23.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
MAY , 1977				
27...	1000	1540	25.0	24.0
JUL				
13...	1100	1950	27.0	28.0
AUG				
30...	1400	715	23.0	27.0
SEP				
07...	1135	736	27.0	23.5

01619000 - ANTIETAM CREEK NEAR WAYNESBORO, PA. (LAT 39 42 59 LONG 077 36 28)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976				
07...	1230	107	14.0	17.0
NOV				
17...	0950	110	5.0	--
DEC				
06...	1345	81	3.5	3.0
JAN , 1977				
04...	1420	70	4.5	5.0
27...	1340	81	2.5	.5
FEB				
21...	1340	57	4.0	-.5

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
APR , 1977				
11...	1600	230	15.5	30.0
MAY				
26...	1300	88	18.0	23.0
JUL				
12...	1325	48	21.5	29.0
AUG				
22...	1425	48	20.0	23.0
26...	1045	41	15.5	23.0
SEP				
08...	1415	36	19.0	23.5

POTOMAC RIVER BASIN--CONTINUED

01637500 - CATOCTIN CREEK NEAR MIDDLETOWN, MD. (LAT 39 25 35 LONG 077 33 25)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					AUG , 1977				
07...	0950	84	14.0	14.0	18...	1240	23	22.0	21.0
NOV					22...	1435	34	24.0	30.5
17...	1650	59	4.0	4.0	26...	1155	8.3	18.5	22.5
MAR , 1977					SEP				
29...	1425	167	12.5	26.0	13...	1600	2.4	21.5	25.0
MAY									
10...	1410	37	12.5	17.5					

01639500 - BIG PIPE CREEK AT BRUCEVILLE, MD. (LAT 39 36 45 LONG 077 14 10)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUN , 1977				
05...	1250	89	15.0	17.5	09...	1420	41	18.0	21.0
NOV					JUL				
16...	1255	65	4.0	12.0	22...	1215	41	27.5	33.0
FEB , 1977					AUG				
16...	1150	72	.0	-3.5	25...	1050	32	20.0	17.0
MAR									
28...	1200	140	8.0	8.0					

01640500 - OWENS CREEK AT LANTZ, MD. (LAT 39 40 36 LONG 077 27 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
06...	1015	17	12.5	13.0	04...	1450	7.8	11.5	13.5
NOV					JUN				
17...	1010	8.8	4.0	5.0	14...	1600	3.0	15.5	26.5
JAN , 1977					JUL				
04...	0940	4.6	.0	-2.0	21...	1530	1.2	26.0	30.0
FEB					AUG				
15...	1010	7.1	1.0	-1.0	24...	1350	.90	19.5	20.0
MAR					SEP				
28...	1530	38	7.0	10.5	21...	1250	.36	18.0	17.0

01641000 - HUNTING CREEK AT JIMTOWN, MD. (LAT 39 35 40 LONG 077 23 50)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
06...	1240	38	14.5	17.0	06...	1110	36	15.0	24.0
21...	1500	71	11.0	14.0	JUN				
NOV					15...	0940	7.4	21.5	23.0
17...	1225	23	5.0	9.0	JUL				
FEB , 1977					20...	1505	7.2	25.0	30.0
15...	1210	15	3.0	1.0	AUG				
MAR					25...	1300	4.5	19.5	22.0
29...	0900	68	7.0	16.5					

01641500 - FISHING CREEK NEAR LEWISTOWN, MD. (LAT 39 31 35 LONG 077 28 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
06...	1530	26	13.0	17.0	04...	1130	11	11.5	18.0
21...	1205	26	9.0	8.0	JUN				
NOV					15...	1210	3.8	16.5	19.0
17...	1440	13	6.0	8.0	JUL				
JAN , 1977					21...	1255	2.3	21.0	28.5
04...	1500	6.8	1.5	1.5	AUG				
FEB					25...	1530	2.4	17.0	20.5
15...	1450	6.2	3.0	2.0	SEP				
MAR					30...	1100	1.4	13.5	16.5
29...	1150	26	10.0	18.5					

01642500 - LINGANORE CREEK NEAR FREDERICK, MD. (LAT 39 24 55 LONG 077 20 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
07...	1250	65	17.0	19.5	10...	1055	58	14.0	12.0
NOV					JUN				
18...	1210	66	6.0	6.5	15...	1800	37	22.0	24.0
JAN , 1977					AUG				
06...	1130	37	2.0	-2.0	18...	1630	73	24.0	23.0
FEB					23...	1520	26	24.5	25.0
14...	1155	98	2.0	6.0	SEP				
MAR					13...	1110	8.1	21.5	23.0
30...	1135	95	10.0	25.0	30...	1315	9.3	20.5	20.0

POTOMAC RIVER BASIN--CONTINUED

01643000 - MONOCACY R AT JUG BRIDGE NR FREDERICK, MD. (LAT 39 23 16 LONG 077 22 48)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUL , 1977				
07...	1650	785	16.5	19.5	13...	1155	162	25.5	31.0
NOV					AUG				
18...	1520	569	5.0	9.5	23...	1315	423	23.0	26.0
FEB , 1977					SEP				
03...	1235	244	2.0	.5	13...	1420	90	21.0	26.0
JUN									
15...	1545	218	23.0	25.5					

01643500 - BENNETT CREEK AT PARK MILLS, MD. (LAT 39 17 40 LONG 077 24 30)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
08...	1010	148	16.5	18.0	05...	1105	47	15.0	21.5
NOV					JUN				
18...	0940	43	3.0	7.5	16...	1705	25	22.5	26.5
MAR , 1977					SEP				
30...	0830	68	13.0	19.0	14...	1635	5.5	21.0	22.0

01645200 - WATTS BRANCH AT ROCKVILLE, MD. (LAT 39 05 03 LONG 077 10 38)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAR , 1977				
18...	1115	1.2	9.0	7.5	24...	1110	2.7	6.0	6.5
DEC					MAY				
29...	1245	1.7	2.5	.0	03...	1415	1.2	19.5	21.5
FEB , 1977					JUN				
11...	1435	4.1	1.0	17.0	20...	1445	.73	23.0	26.5

01646550 - LITTLE FALLS BRANCH NEAR BETHESDA, MD. (LAT 38 57 27 LONG 077 06 31)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
13...	1140	1.1	12.0	14.5	09...	1430	1.0	13.0	10.0
DEC					AUG				
29...	1110	1.5	3.0	.0	11...	1110	1.4	24.5	26.0
APR , 1977					SEP				
01...	1300	.71	14.0	16.0	01...	1045	.80	24.5	28.0

01647720 - N. BR. ROCK CREEK NEAR NORBECK, MD. (LAT 39 06 59 LONG 077 06 09)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAR , 1977				
14...	1320	3.8	12.0	14.0	31...	1310	6.8	15.5	15.5
NOV					MAY				
12...	1440	5.0	5.5	5.0	11...	1325	4.9	12.0	16.0
DEC					JUN				
28...	1325	5.0	1.5	6.0	20...	1045	2.3	20.0	22.5
FEB , 1977									
11...	1055	7.8	1.0	11.0					

01647740 - N BR ROCK CREEK NR ROCKVILLE, MD. (LAT 39 06 09 LONG 077 07 12)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					FEB , 1977				
15...	1305	12	16.0	25.0	11...	1230	6.8	4.0	19.0
NOV					MAR				
12...	1300	7.4	7.0	5.0	31...	1425	18	12.5	17.0
DEC					JUN				
29...	1105	7.3	3.0	.5	20...	1230	3.6	24.5	25.0

01648000 - ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, D. C. (LAT 38 58 21 LONG 077 02 25)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
13...	1450	70	14.0	21.0	09...	1035	34	14.0	9.0
NOV					JUN				
15...	1355	28	5.0	7.5	20...	1055	17	21.0	21.5
DEC					JUL				
29...	1410	30	2.5	1.0	22...	1040	19	25.0	25.0
APR , 1977					SEP				
01...	1035	43	12.0	13.0	01...	1235	12	25.5	28.0

POTOMAC RIVER BASIN--CONTINUED

01649500 - N.E. BR. ANACOSTIA RIVER AT RIVERDALE, MD. (LAT 38 57 37 LONG 076 55 34)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUN , 1977				
14...	1105	36	13.0	17.5	17...	1055	19	23.0	26.0
NOV					JUL				
19...	1130	39	7.0	19.0	21...	1105	25	29.5	34.0
MAR , 1977					AUG				
28...	1045	52	9.0	9.5	03...	1315	16	27.0	30.0
MAY									
06...	1040	48	20.0	26.0					

01650500 - N W BR ANACOSTIA R NR COLESVILLE, MD (LAT 39 03 55 LONG 077 01 48)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
FEB , 1977					JUN , 1977				
02...	1125	7.3	.5	1.5	17...	1520	4.6	20.0	25.0
MAR					JUL				
24...	1440	20	8.0	6.5	21...	1550	4.6	26.5	28.5
MAY									
10...	1405	10	11.0	13.5					

01651000 - NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILL (LAT 38 57 09 LONG 076 58 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
14...	1320	19	16.0	16.0	06...	1300	24	24.0	30.0
NOV					JUN				
19...	1330	22	8.0	19.0	17...	1255	8.9	27.0	29.0
MAR , 1977					JUL				
31...	1330	25	18.0	18.0	21...	1310	13	31.0	35.5

01653500 - HENSON CREEK AT OXON HILL, MD. (LAT 38 47 16 LONG 076 58 42)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUN , 1977				
07...	1350	6.3	18.0	22.0	16...	1405	3.1	20.0	26.0
NOV					JUL				
18...	1335	8.1	6.0	11.0	29...	1400	.38	25.5	27.0
MAY , 1977									
05...	1225	13	18.0	24.0					

01653600 - PISCATAWAY CREEK AT PISCATAWAY, MD. (LAT 38 42 20 LONG 076 58 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					JUN , 1977				
07...	1140	14	17.0	21.0	16...	1110	2.5	18.0	26.0
NOV					JUL				
18...	1110	21	4.5	12.0	29...	1100	.20	20.5	23.5
MAR , 1977					AUG				
31...	0925	25	15.0	20.0	26...	0845	2.2	17.5	13.0
MAY									
05...	0955	28	16.0	21.0					

01661050 - ST. CLEMENT CREEK NEAR CLEMENTS, MARYLAND (LAT 38 20 00 LONG 076 43 31)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)
OCT , 1976					MAR , 1977				
06...	1455	8.0	16.0	20.0	30...	1230	12	17.0	26.0
NOV					MAY				
17...	1400	10	4.0	7.5	04...	1310	9.1	16.5	17.0
JAN , 1977									
04...	1315	11	.5	2.0					

POTOMAC RIVER BASIN--CONTINUED

01661500 - ST. MARYS RIVER AT GREAT MILLS, MD. (LAT 38 14 36 LONG 076 30 13)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
06...	1105	14	16.0	19.0
NOV				
07...	1115	11	4.0	7.0
MAR , 1977				
30...	1000	14	16.0	25.0
MAY				
04...	0945	10	16.0	16.0
JUN				
15...	1145	3.4	17.0	19.0
JUL				
28...	1135	2.0	19.5	23.5
AUG				
25...	0950	8.1	20.0	17.5

MONONGAHELA RIVER BASIN

03075500 - YOUGHIOGHENY RIVER NEAR OAKLAND, MD. (LAT 39 25 19 LONG 079 25 32)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
05...	1340	114	15.0	20.5
NOV				
17...	1350	137	1.5	9.0
JAN , 1977				
19...	1215	58	.0	-13.5
FEB				
16...	1115	302	.0	-8.0
25...	1440	2900	.5	11.0
APR				
06...	1435	1270	6.0	1.0
MAY				
16...	1300	156	16.0	22.5
JUL				
25...	1025	44	22.0	21.0

03076500 - YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD. (LAT 39 39 13 LONG 079 24 31)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
05...	0920	187	14.0	11.0
NOV				
17...	0930	270	2.0	-3.0
DEC				
09...	0855	1030	.5	-8.0
JAN , 1977				
14...	1320	144	.0	.0
FEB				
25...	1025	3860	1.0	9.5
APR				
06...	1010	2250	6.0	3.0
MAY				
16...	0900	274	13.5	11.5
SEP				
06...	1050	84	20.0	22.0

03076600 - BEAR CREEK AT FRIENDSVILLE, MD. (LAT 39 39 22 LONG 079 23 41)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	AIR TEMPER-ATURE (DEG C)
OCT , 1976				
05...	1120	16	12.5	18.5
NOV				
17...	1220	40	1.0	2.0
JAN , 1977				
13...	1455	18	.0	-7.0
FEB				
15...	1240	92	.5	-3.0
25...	1155	660	4.5	10.5
APR				
06...	1155	339	5.0	2.0
MAY				
16...	1105	41	11.5	20.0
JUL				
28...	1250	12	18.0	21.5
SEP				
06...	0958	14	17.5	21.0

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1977

					Measurements	
Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Discharge (ft^3/s)
		Susquehanna River basin				
01579875	Deer Creek at Gorsuch Mills, MD	Lat 39°42'21", long 76°35'15", Baltimore County, at bridge on West Liberty Road at Gorsuch Mills, and 0.8 mi downstream from Harris Mill Creek.	a25	1975-77	8- 4-77 9-21-77	12 11
01579900	Big Branch at Harkins, MD	Lat 39°41'53", long 76°27'59", Harford County, at bridge on State Highway 547, 0.8 mi west of Harkins, and 1.8 mi upstream from mouth.	6.39	1975-77	8- 5-77 9-21-77	2.6 2.8
01579925	Little Deer Creek near Federal Hill, MD	Lat 39°39'42", long 76°26'55", Harford County, at bridge on State Highway 165, 0.5 mi upstream from mouth, and 1.9 mi northeast of Federal Hill.	14.0	1975-77	8- 4-77 9-21-77	6.4 5.3
		Gunpowder River basin				
01581830	Grave Run near Beckleysville, MD	Lat 39°39'17", long 76°46'47", Baltimore County, at bridge on Upper Beckleysville Road, 0.9 mi north of Beckleysville, and 1.7 mi downstream from Indian Run.	7.68	1977	5-31-77 8- 4-77 9-16-77	5.1 2.9 2.4
01581870	Georges Run near Beckleysville, MD	Lat 39°37'33", long 76°46'23", Baltimore County, at bridge on Georges Creek Road, 0.6 mi upstream from mouth, and 1.2 mi south of Beckleysville.	15.8	1977	5-31-77 8- 4-77 9-16-77	9.8 5.8 4.4
01581960	Beetree Run at Bentley Springs, MD	Lat 39°40'23", long 76°40'31", Baltimore County, at bridge on Bentley Road in Bentley Springs, and 200 feet upstream from mouth.	9.72	1975-77	8- 4-77 9-21-77	4.4 4.7
01581980	Third Mine Branch near Stablersville, MD	Lat 39°39'27", long 76°37'24", Baltimore County, at bridge on Ensor Road, 0.6 mi northwest of Stablersville, and 2.6 mi upstream from mouth.	5.27	1975-77	8- 4-77 9-21-77	1.9 1.7
01582900	Greene Branch at Phoenix, MD	Lat 39°30'22", long 76°36'50", Baltimore County, at bridge on Phoenix Road, 0.4 mi upstream from mouth, and 0.6 mi northwest of Phoenix.	4.45	1973, 1975-77	8- 5-77 9-23-77	1.2 1.6
01583100	Piney Run at Dover, MD	Lat 39°31'17", long 76°46'00", Baltimore County, at bridge on State Highway 128, 0.7 mi north of Dover, and 0.8 mi upstream from mouth.	12.3	1975-77	8- 4-77 9-23-77	4.6 4.7
		Patapsco River basin				
01585700	Deep Run at Lawndale, MD	Lat 39°32'06", long 76°52'33", Carroll County, at bridge on county highway, 0.9 mi upstream from mouth, and 1.0 mi north of Lawndale.	6.70	1975-77	8- 4-77	1.7

a Approximately.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Measurements	
					Date	Discharge (ft³/s)
		Patapsco River basin--Continued				
01586550	Middle Run near Finksburg, MD	Lat 39°27'44", long 76°54'30", Carroll County, at bridge on Louisville Road, 1.0 mi upstream from Prugh Branch, and 1.5 mi east of Gamber.	6.18	1973, 1975-77	8- 8-77 9-21-77	2.3 2.2
01586650	Little Morgan Run near Eldersburg, MD	Lat 39°25'35", long 76°57'40", Carroll County, at bridge on Bartholow Road, 0.7 mi north of Johnsville, and 0.9 mi upstream from mouth.	7.13	1973, 1976-77	9-21-77	1.8
01587070	South Branch Patapsco River at Woodbine, MD	Lat 39°21'44", long 77°04'00", Carroll County, at bridge on county highway, 0.1 mi upstream from Gillis Falls, and 0.3 mi west of Woodbine.	11.4	1975-77	8- 5-77 9-21-77	2.4 2.1
01587170	Gillis Falls at Woodbine, MD	Lat 39°21'48", long 77°03'59", Carroll County, at bridge on dirt road, 0.2 mi upstream from mouth, and 0.3 mi northwest of Woodbine.	19.4	1975-77	8- 5-77 9-21-77	4.0 3.8
01589080	Deep Run at Hanover, MD	Lat 39°11'24", long 76°43'12", Howard County, at bridge on county highway, 0.3 mi southeast of Hanover, and 2.4 mi upstream from mouth.	18.0	1975-77	7- 7-77 7-11-77 9-16-77	4.3 2.8 1.7
01589230	Red Run near Owings Mills, MD	Lat 39°24'17", long 76°46'45", Baltimore County, at bridge on Painters Mill Road, 0.2 mi upstream from mouth, and 1.1 mi south of Owings Mills.	7.39	1975-77	8- 4-77 9-23-77	2.4 1.9
01589370	Jones Falls at Eccleston, MD	Lat 39°24'35", long 76°43'37", Baltimore County, at bridge on State Highway 129 at Eccleston, and 1.1 mi upstream from North Branch.	2.86	1976-77	8- 4-77 9-16-77	2.2 1.6
		Patuxent River basin				
01590900	Cabin Branch near Florence, MD	Lat 39°16'36", long 77°06'20", Howard County, at bridge on light-duty road, 0.9 mi upstream from mouth, and 2.3 mi south of Florence.	8.36	1975-77	8- 5-77 9-22-77	2.2 1.5
01591375	Cattail Creek tributary at Daisy, MD	Lat 39°17'58", long 77°03'52", Howard County, at bridge on Daisy Road, 0.3 mi upstream from mouth, and 0.5 mi north of Daisy.	3.12	1977	5-31-77 8- 4-77 9-15-77	1.5 .94 .77
01591650	Hawlings River near Unity, MD	Lat 39°13'03", long 77°06'21", Montgomery County, at bridge on Sundown Road, 2.2 mi southwest of Unity, and 5.0 mi upstream from Reddy Branch.	5.08	1977	5-31-77 8- 4-77 9-15-77	2.2 .75 .42
01591700	Hawlings River near Sandy Spring, MD	Lat 39°10'29", long 77°01'22", Montgomery County, 100 ft downstream from bridge on State Highway 650, 1.0 mi upstream from mouth, and 1.7 mi north of Sandy Spring.	27.2	1975-77	8- 5-77 9-22-77	3.0 1.6
01593650	Middle Patuxent River tributary near Dayton, MD	Lat 39°14'12", long 76°56'27", Howard County, at bridge on Sheppard Road, 1.6 mi upstream from mouth, and 2.5 mi east of Dayton.	4.25	1977	5-31-77 8- 4-77 9-15-77	2.2 1.2 .69
01593700	Middle Patuxent River tributary near Clarksville, MD	Lat 39°12'00", long 76°55'12", Howard County, 0.1 mi upstream from bridge on Trotter Road, 0.8 mi upstream from mouth, and 1.3 mi southeast of Clarksville.	6.24	1977	5-31-77 8- 4-77 9-15-77	2.8 1.6 1.1
01594300	Towsers Branch at Conaways, MD	Lat 39°02'00", long 76°41'38", Anne Arundel County, at bridge on Evergreen Road, 0.7 mi north of Conaways, and 0.8 mi upstream from mouth.	5.69	1975-77	6- 7-77 7-11-77 9-16-77	1.2 .65 .55
01594455	Stocketts Run near Hardesty, MD	Lat 38°52'58", long 76°39'47", Anne Arundel County, at bridge on Sands Road, 0.9 mi upstream from mouth, and 1.3 mi southeast of Hardesty.	6.68	1977	6- 6-77 7-11-77 8- 8-77 9-14-77	.93 .36 .17 .11
01594465	Rock Branch at Bayard, MD	Lat 38°51'17", long 76°41'16", Anne Arundel County, at bridge on Sands Road, 0.2 mi upstream from mouth, and 0.8 mi northwest of Bayard.	5.88	1977	6- 6-77 7-11-77 9-14-77	.90 .43 .12

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Measurements Date	Measurements Discharge (ft³/s)
		Patuxent River basin--Continued				
01594490	Northeast Branch at Kolbes Corner, MD	Lat 38°54'03", long 76°47'35", Prince Georges County, at bridge on State Highway 556, 0.1 mi north of Kolbes Corner, and 0.5 mi upstream from mouth.	7.74	1977	6- 7-77 7-11-77 8- 8-77 9-16-77	0.64 .17 b.41 .38
01594525	Collington Branch at Upper Marlboro, MD	Lat 38°49'16", long 76°44'40", Prince Georges County, at railroad bridge at Upper Marlboro, and 0.1 mi upstream from mouth.	22.9	1964-66, 1975-77	6- 7-77 7-11-77 9-16-77	4.3 2.3 1.8
		Potomac River basin				
01594975	Glade Run at Steyer, MD	Lat 39°18'08", long 79°19'33", Garrett County, on Steyer Gorman Road, 0.1 mi upstream from mouth, and 0.7 mi west of Steyer.	8.86	1977	6- 1-77 6- 9-77 9-13-77	2.6 4.0 .54
01596600	Big Run near Swanton, MD	Lat 39°32'45", long 79°08'31", Garrett County, on Big Run Road, 0.3 mi downstream from Monroe Run, and 7.5 mi northeast of Swanton.	13.4	1977	6- 1-77 8- 9-77 9-13-77	2.8 1.0 .42
01597100	Middle Fork near Swanton, MD	Lat 39°30'46", long 79°09'17", Garrett County, on Savage River Road, 1.0 mi downstream from Toms Spring Run, and 5.5 mi northeast of Swanton.	10.8	1977	6- 1-77 8- 9-77 9-13-77	2.3 .64 .07
01601325	Jennings Run at Corriganville, MD	Lat 39°41'36", long 78°47'17", Allegany County, at bridge on State Highway 36 at Corriganville, and 0.1 mi upstream from mouth.	37.7	1975-77	4-18-77 8-10-77 9-13-77	43 1.2 1.1
01605425	Mill Run at Oldtown, MD	Lat 39°32'26", long 78°36'43", Allegany County, at bridge on county highway, 0.1 mi south of Oldtown, and 0.3 mi upstream from mouth.	10.6	1975-77	4-18-77 8- 9-77 9-13-77	5.1 .92 .46
01605475	Seven Springs Run at Oldtown, MD	Lat 39°32'29", long 78°36'28", Allegany County, at bridge on county highway at Oldtown, and 1.4 mi downstream from mouth of Trading Run.	9.16	1975-77	4-18-77 8- 9-77 9-13-77	3.8 .70 .75
01608950	Murley Branch near Flintstone, MD	Lat 39°41'37", long 78°34'07", Allegany County, on Town Creek Road, 0.7 mi upstream from mouth, and 1.1 mi south of Flintstone.	11.9	1977	6- 2-77 8-10-77 9-12-77	11 5.9 4.1
01608975	Maple Run near Town Creek, MD	Lat 39°36'46", long 78°31'52", Allegany County, on Jacobs Road, 2.7 mi upstream from mouth, and 6.0 mi north of Town Creek.	7.10	1977	6- 2-77 8-10-77 9-12-77	.03 0 0
01610060	Fifteen Mile Creek near Piney Grove, MD	Lat 39°41'13", long 78°27'17", Allegany County, at bridge on light-duty road, 1.1 mi upstream from Piclic Run, and 4.3 mi southwest of Piney Grove.	20.2	1975-77	4-18-77 8- 9-77 9-13-77	8.3 .08 .20
01610065	Deep Run near Little Orleans, MD	Lat 39°39'12", long 78°27'09", Allegany County, at bridge on light-duty road, 0.5 mi upstream from mouth, and 3.9 mi northwest of Little Orleans.	6.26	1975-77	4-18-77 8- 9-77 9-13-77	3.2 0 0
01610075	Fifteen Mile Creek at Little Orleans, MD	Lat 39°37'41", long 78°23'22", Allegany County, at bridge on light-duty road at Little Orleans, and 1.5 mi downstream from Flat Run.	61.6	1975-77	4-18-77 8- 9-77 9-13-77	29 .21 .72
*01610150	Bear Creek at Forest Park, MD	Lat 39°42'07", long 78°19'02", Washington County, at upstream side of culvert on U.S. Highway 40, 0.2 mi upstream from mouth, and 0.9 mi west of Forest Park.	10.4	1975-77	4-18-77 8- 9-77 9-13-77	5.6 .40 .12
*01613150	Ditch Run near Hancock, MD	Lat 39°41'30", long 78°07'57", Washington County, at upstream side of culvert on U.S. Highway 40, 0.3 mi upstream from mouth, and 2.7 mi east of Hancock.	4.80	1975-77	4-18-77 8- 9-77 9-13-77	2.7 .22 .07

* Also a crest-stage partial-record station.
b Not base flow.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Potomac River basin--Continued				
01614525	Rockdale Run at Fairview, MD	Lat 39°42'07", long 77°50'45", Washington County, at bridge on Rockdale Road, 0.7 mi south of Fairview, and 1.7 mi upstream from mouth.	9.67	1976-77	8-31-76 4-21-77 9- 8-77	3.1 13 2.8
01614575	Rush Run near Huyett, MD	Lat 39°40'23", long 77°47'37", Washington County, at bridge on State Highway 63, 1.5 mi north of Huyett, and 1.9 mi upstream from mouth.	5.20	1976-77	8-31-76 4-21-77 9- 8-77	1.9 15 2.3
01614625	Meadow Brook at Conococheague, MD	Lat 39°38'55", long 77°51'19", Washington County, at bridge on Ridge Road, 0.7 mi southwest of Conococheague, and 2.1 mi upstream from mouth.	6.77	1976-77	8-31-76 4-21-77 9- 8-77	.83 7.1 .51
01614675	Conococheague Creek tributary at Kemps, MD	Lat 39°37'39", long 77°48'43", Washington County, at bridge on light-duty road, 0.4 mi upstream from mouth, and 0.9 mi north of Kemps.	7.94	1977	9- 8-77	.76
01617600	Downey Branch near Downsville, MD	Lat 39°32'19", long 77°49'11", Washington County, at bridge on Dellinger Road, 0.6 mi upstream from mouth, and 1.1 mi southwest of Downsville.	3.00	1976-77	9- 2-76 4-21-77 9- 8-77	1.2 4.2 1.0
01617780	St. James Run at Spielman, MD	Lat 39°33'03", long 77°45'52", Washington County, at bridge on Jordon Road, 0.9 mi north of Spielman, and 1.0 mi upstream from Marsh Run.	7.14	1977	9- 8-77	2.8
01619050	Little Antietam Creek at Leitersburg, MD	Lat 39°40'57", long 77°37'44", Washington County, at bridge on State Highway 62, 0.4 mi upstream from mouth, and 0.8 mi southwest of Leitersburg.	24.5	1976-77	8-31-76 4-21-77 9- 8-77	8.8 30 6.9
01619145	West Branch at Paramount, MD	Lat 39°41'25", long 77°41'25", Washington County, at bridge on Marsh Pike, 0.3 mi upstream from mouth, and 0.6 mi north of Paramount.	5.07	1977	9- 8-77	1.6
01619150	Marsh Run at Fiddlesburg, MD	Lat 39°39'29", long 77°41'16", Washington County, at bridge on Old Forge Road at Fiddlesburg, 0.5 mi east of Hagerstown city limits, and 0.6 mi above mouth.	a31	1965-74, 1976-77	4-21-77 9- 8-77	35 3.7
01619275	Landis Spring Branch near Benevola, MD	Lat 39°34'17", long 77°41'23", Washington County, at bridge on Alternate U.S. Highway 40, 100 ft upstream from mouth, and 1.9 mi northwest of Benevola.	6.60	1976-77	9- 2-76 4-21-77 9- 8-77	1.6 8.2 1.4
01619325	Beaver Creek at Benevola, MD	Lat 39°33'04", long 77°40'55", Washington County, at bridge on light-duty road at Benevola, and 0.4 mi upstream from Little Beaver Creek.	22.9	1975-77	4-21-77 9- 8-77	39 14
01619350	Little Beaver Creek at Benevola, MD	Lat 39°32'48", long 77°40'39", Washington County, at bridge on U.S. Highway 40 (Alternate) at Benevola, and 0.2 mi upstream from Beaver Creek.	8.70	1975-77	4-21-77 9- 8-77	16 5.6
01619480	Little Antietam Creek at Keedysville, MD	Lat 39°29'10", long 77°42'05", Washington County, at bridge on Koffman Lane at Keddysville, and 1.2 mi upstream from mouth.	a24	1964-67, 1976-77	4-21-77 9- 8-77	33 7.4
01619525	Sharmans Branch near Antietam, MD	Lat 39°25'42", long 77"43'26", Washington County, at bridge on Mills Road, 0.7 mi upstream from mouth, and 1.3 mi northeast of Antietam.	4.62	1977	9- 8-77	.18
01636730	Israel Creek at Weverton, MD	Lat 39°19'45", long 77°41'03", Washington County, at bridge on light-duty road at Weverton, and 0.1 mi upstream from mouth.	13.2	1975-77	8- 5-77 9-16-77	.93 .69
01636850	Little Catoctin Creek near Brunswick, MD	Lat 39°19'25", long 77°35'35", Frederick County, at bridge on State Highway 464, 1.4 mi northeast of Brunswick, and 2.4 mi upstream from mouth.	8.64	1977	5-31-77 8- 5-77 9-16-77	1.7 .33 .23

a Approximately.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Measurements	
					Date	Discharge (ft³/s)
		Potomac River basin--Continued				
01636975	Middle Creek at Ellerton, MD	Lat 39°31'33", long 77°32'15", Frederick County, at bridge on Crow Rock Road, 0.4 mi east of Ellerton, and 0.4 mi upstream from West Branch.	22.7	1977	5-31-77 8- 5-77 9-21-77	7.9 1.4 1.9
01638600	Tuscarora Creek at Tuscarora, MD	Lat 39°15'06", long 77°28'49", Frederick County, at bridge on light-duty road, 0.7 mi southwest of Tuscarora, and 0.8 mi upstream from mouth.	20.3	1975-77	8- 4-77 8- 8-77 9-21-77	2.7 4.5 2.6
01639325	Friends Creek near Emmitsburg, MD	Lat 39°43'03", long 77°23'35", Frederick County, at concrete ford on Hornets Nest Road, 2.1 mi upstream from mouth, and 3.5 mi northwest of Emmitsburg.	12.2	1977	5-31-77 8- 4-77 9-16-77	3.1 .26 .20
01639420	Deep Run at Union Mills, MD	Lat 39°40'08", long 77°00'41", Carroll County, at bridge on light-duty road, 0.1 mi upstream from mouth, and 0.7 mi east of Union Mills.	5.46	1975-77	8- 8-77 9-23-77	.49 .50
01639440	Silver Run near Silver Run, MD	Lat 39°40'38", long 77°05'37", Carroll County, at bridge on light-duty road, 1.0 mi upstream from mouth, and 2.6 mi west of Silver Run.	8.77	1975-77	8- 4-77 9-23-77	.66 .96
01639465	Bear Branch near Mayberry, MD	Lat 39°38'07", long 77°07'41", Carroll County, at bridge on State Highway 32, 0.8 mi upstream from mouth, and 1.6 mi west of Mayberry.	13.9	1975-77	8- 8-77 9-23-77	2.8 3.2
01640160	Beaver Dam Creek near Union Bridge, MD	Lat 39°34'11", long 77°12'53", Frederick County, at bridge on Good Intent Road, 0.4 mi upstream from mouth, and 1.9 mi west of Union Bridge.	7.04	1977	5-31-77 8- 4-77 9-16-77	2.7 1.2 .97
01640600	Owens Creek near Thurmont, MD	Lat 39°38'26", long 77°23'40", Frederick County, at bridge on county highway, 0.8 mi upstream from Little Owens Creek, and 1.2 mi northwest of Thurmont.	14.4	1975-77	8- 4-77 9-16-77	1.4 1.2
01640650	Little Owens Creek near Thurmont, MD	Lat 39°38'58", long 77°23'41", Frederick County, at bridge on light-duty road, 1.0 mi upstream from mouth, and 2.0 mi northeast of Thurmont.	6.16	1975-77	8- 4-77 9-16-77	.82 .71
01640720	Beaver Branch at Rocky Ridge, MD	Lat 39°36'20", long 77°19'50", Frederick County, at bridge on State Highway 77, 0.6 mi west of Rocky Ridge, and 0.8 mi upstream from mouth.	6.53	1977	5-31-77 8- 4-77 9-16-77	1.1 0 0
01641900	Tuscarora Creek near Frederick, MD	Lat 39°27'52", long 77°24'11", Frederick County, 0.1 mi upstream from U.S. Highway 15 bridge, 1.8 mi upstream from mouth, and 2.0 mi north of Frederick.	16.5	1975-77	9-16-77	1.8
01642050	Israel Creek near Walkersville, MD	Lat 39°28'27", long 77°20'26", Frederick County, at bridge on Crum Road, 1.1 mi southeast of Walkersville, and 2.8 mi upstream from mouth.	a29	1964-66, 1975-77	8- 4-77 9-21-77	2.6 2.1
01642450	Bens Branch near New Market, MD	Lat 39°24'58", long 77°16'45", Frederick County, at bridge on light-duty road, 1.1 mi upstream from mouth, and 2.3 mi north of New Market.	11.8	1975-77	8- 5-77 9-21-77	2.3 1.8
01643125	Ballenger Creek near Lime Kiln, MD	Lat 39°21'52", long 77°25'01", Frederick County, at bridge on State Highway 85, 0.5 mi upstream from mouth, and 1.2 mi northeast of Lime Kiln.	20.2	1977	5-31-77 8- 5-77 9-16-77	9.7 3.8 2.7
01643400	Little Bennett Creek at Hyattstown, MD	Lat 39°16'46", long 77°18'52", Montgomery County, at bridge on State Highway 355 at Hyattstown, and 0.7 mi downstream from Soper Branch.	12.8	1968-69, 1975-77	8- 5-77 9-21-77	2.2 1.6

a Approximately.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Potomac River basin--Continued				
01643615	Broad Run near Elmer, MD	Lat 39°07'06", long 77°28'52", Montgomery County, at bridge on River Road, 0.5 mi upstream from mouth, and 1.2 mi south of Elmer.	14.2	1975-77	8- 8-77 9-21-77	.36 .14
01644425	Bucklodge Branch near Dawsonville, MD	Lat 39°09'11", long 77°20'30", Montgomery County, at bridge on light-duty road, 0.7 mi upstream from mouth, and 1.7 mi north of Dawsonville.	8.47	1975-77	8- 8-77 9-22-77	1.1 .9
01644480	Goshen Branch at Goshen, MD	Lat 39°12'10", long 77°12'06", Montgomery County, 0.1 mi upstream from mouth, and 0.7 mi west of Goshen.	7.63	1975-77	8- 5-77 9-22-77	2.3 1.6
01645050	Dry Seneca Creek near Seneca, MD	Lat 39°05'38", long 77°20'15", Montgomery County, at bridge on Montevideo Road, 0.4 mi upstream from mouth, and 1.1 mi northwest of Seneca.	19.2	1975-77	8- 8-77 9-21-77	1.2 .48
01647500	Rock Creek at Redland, MD	Lat 39°08'14", long 77°07'46", Montgomery County, at bridge on State Highway 115, 0.6 mi upstream from Mill Creek and 1.0 mi souteast of Redland.	7.45	1977	5-31-77 8- 4-77 9-15-77	2.8 1.2 .50
01653625	Tinkers Creek at Piscataway, MD	Lat 38°42'50", long 76°58'16", Prince Georges County, at bridge on Gallahan Road, 0.5 mi upstream from mouth, and 0.8 mi north of Piscataway.	15.9	1975-77	6- 7-77 9-14-77	2.5 0
01660740	Port Tobacco Creek near Marshalls Corner, MD	Lat 38°32'34", long 77°01'04", Charles County, at bridge on State Highway 225, 0.25 mi downstream from Jennie Run, and 1.4 mi southeast of Marshalls Corner.	15.8	1977	6- 6-77 9-14-77	3.1 .04
01660905	Zekiah Swamp Run near Malcom, MD	Lat 38°36'52", long 76°49'59", Charles County, at bridge on State Highway 382, 0.4 mi downstream from Wolf Den Branch, and 2.4 mi west of Malcom.	12.1	1975-77	7- 7-77 9-16-77	2.6 0
01660930	Clark Run near Bel Alton, MD	Lat 38°28'21", long 76°57'22", Charles County, at bridge on Newtown Road, 1.5 mi northeast of Bel Alton, and 1.8 mi upstream from mouth.	10.4	1975-77	7- 7-77 9-13-77	.2 38
		Monongahela River basin				
03075350	Cherry Creek near Crellin, MD	Lat 39°22'06", long 79°27'16", Garrett County, at bridge on Underwood Road, 0.4 mi upstream from mouth, and 1.5 mi south of Crellin.	16.7	1977	6- 1-77 8- 9-77 9-13-77	4.5 b24 1.5
03075475	Little Youghiogheny River at Loch Lynn Heights, MD	Lat 39°23'54", long 79°22'11", Garrett County, at bridge on State Highway 41, 0.4 mi northeast of Loch Lynn Heights, and 3.2 mi downstream from Block Run.	13.2	1975-77	4-18-77 8- 9-77 9-13-77	12 4.3 1.0
03075900	Cherry Creek near McHenry, MD	Lat 39°32'20", long 79°18'55", Garrett County, 200 ft east of Rock Lodge Road, 200 ft upstream from mouth, and 4 mi southeast of McHenry.	12.3	1973, 1975-77	4-18-77 8- 9-77 9-13-77	13 2.7 .87
03076590	South Branch Bear Creek near Friendsville, MD	Lat 39°39'11", long 79°23'06", Garrett County, at bridge on light-duty road, 100 ft upstream from mouth, and 1.2 mi southeast of Friendsville.	16.8	1975-77	4-18-77 8- 9-77 9-13-77	14 3.3 1.8
03077925	North Branch Casselman River near Grantsville, MD	Lat 39°40'08", long 79°10'43", Garrett County, at bridge on State Highway 495, 250 ft upstream from confluence with South Branch Casselman River, and 2.3 mi southwest of Grantsville.	24.4	1975-77	4-18-77 8- 9-77 9-13-77	28 5.6 3.6
03077950	South Branch Casselman River near Grantsville, MD	Lat 39°40'05", long 79°10'42", Garrett County, 250 ft upstream from confluence with North Branch Casselman River, 2.2 mi southwest of Grantsville.	20.8	1975-77	4-18-77 8- 9-77 9-13-77	21 2.5 1.6

b Not base flow.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum: Date	Annual maximum: Gage height (ft)	Annual maximum: Discharge (ft^3/s)
		Wye River basin					
01492500	Sallie Harris Creek near Carmichael, MD	Lat 38°57'55", long 76°06'30", Queen Annes County, at upstream side of bridge on U.S. Highway 50, 2.0 mi northeast of Carmichael, and 2.4 mi upstream from mouth.	8.09	1952-56‡, 1957-77	4- 5-77	2.98	60
		Chester River basin					
01494020	Browns Branch tributary near Church Hill, MD	Lat 39°10'05", long 75°58'41", Queen Annes County, at upstream side of culvert on John Powell Road, 0.6 mi upstream from mouth, and 1.8 mi north of Church Hill.	a1.7	1971-77	1977	<3.17	<25
		Susquehanna River basin					
01577940	Broad Creek tributary at Whiteford, MD	Lat 39°42'14", long 76°21'49", Harford County, at upstream side of culvert on State Highway 165, 0.8 mi upstream from mouth, and 1.0 mi southwest of Whiteford.	.77	1971-77	6-28-77	6.4	130
		Gunpowder River basin					
01582510	Piney Creek near Hereford, MD	Lat 39°34'38", long 76°40'39", Baltimore County, at upstream side of culvert on Highway I-83, 1.1 mi southwest of Hereford, and 5.3 mi upstream from mouth.	a1.5	1962-77	6-28-77	7.1	40
01584500	Little Gunpowder Falls at Laurel Brook, MD	Lat 39°30'18", long 76°25'56", Baltimore County, 750 ft upstream from bridge on Bottom Road, 5 mi southwest of Bel Air, and 10.5 mi upstream from mouth.	36.1	1927-70‡, 1971-77	6-28-77	5.8	2,180
		Patapsco River basin					
01589240	Gwynns Falls at McDonogh, MD	Lat 39°23'28", long 76°45'56", Baltimore County, at bridge on McDonogh Road at McDonogh, and 0.3 mi upstream from Horsehead Branch.	19.3	1958-77	3-22-77	6.1	550
		Potomac River basin					
01596005	Savage River near Frostburg, MD	Lat 39°40'56", long 78°57'54", Garrett County, at upstream side of culvert on U.S. Highway 40, 1.9 mi northwest of Frostburg city limits, and about 26 mi upstream from mouth.	a1.5	1971-77	Unknown	Unknown	Unknown
01601000	Wills Creek below Hyndman, PA	Lat 39°48'43", long 78°43'00", Bedford County, 150 ft above county highway bridge, 150 ft downstream from Pennsylvania Railroad bridge, 0.35 mi downstream from Little Wills Creek, and 0.5 mi south of Hyndman.	146	1951-67‡, 1968-77	10- 9-76	7.67	5,470
01610105	Pratt Hollow tributary at Pratt, MD	Lat 39°41'35", long 78°30'18", Allegany County, at upstream side of culvert on U.S. Highway 40, 0.2 mi northeast of Pratt, and 1.0 mi upstream from Kifer Hollow.	.70	1971-77	10- 9-76	11.9	60

‡ Operated as a continuous-record station.
a Approximately.

Annual maximum discharge at crest-stage partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (ft)	Annual maximum Discharge (ft^3/s)
		Potomac River Basin--Continued					
*01610150	Bear Creek at Forest Park, MD	Lat 39°42'07", long 78°19'02", Washington County, at upstream side of culvert on U.S. Highway 40, 0.2 mi upstream from mouth, and 0.9 mi west of Forest Park.	10.4	1965-69, 1971-77	10- 9-76	7.8	740
*01613150	Ditch Run near Hancock, MD	Lat 39°41'30", long 78°07'57", Washington County, at upstream side of culvert on U.S. Highway 40, 0.3 mi upstream from mouth, and 2.7 mi east of Hancock.	a4.8	1965-77	10- 9-76	8.4	480
01637000	Little Catoctin Creek at Harmony, MD	Lat 39°28'54", long 77°32'17", Frederick County, at upstream side of bridge on county road, 0.9 mi southwest of Harmony, and 2.8 mi upstream from mouth.	8.83	1948-58‡, 1959-77	10- 9-76	9.29	4,770
01637600	Hollow Road Creek near Middletown, MD	Lat 39°26'07", long 77°31'15", Frederick County, at upstream side of culvert on Alternate U.S. Route 40, 1.4 mi southeast of Middletown, 2.0 mi upstream from mouth, and 4.5 mi west of Frederick.	a2.3	1965-73, 1977	10- 9-76	13.3	2,000
01640700	Owens Creek tributary near Rocky Ridge, MD	Lat 39°37'16", long 77°20'26", Frederick County, at upstream side of culvert on Appolds Crossing Road, 0.8 mi upstream from mouth, and 1.6 mi northwest of Rocky Ridge.	a1.2	1967-77	10- 9-76	17.7	1,370
01658000	Mattawoman Creek near Pomonkey, MD	Lat 38°35'45", long 77°03'25", Charles County, at downstream side of bridge on State Highway 227, 1.2 mi southeast of Pomonkey, and 12.6 mi upstream from mouth.	57.7	1949-72‡, 1973-77	6- 9-77	5.02	1,170
01660900	Wolf Den Branch near Cedarville, MD	Lat 38°38'29", long 76°49'02", Charles County, at upstream side of culvert on Forest Road, 1.5 mi upstream from mouth, and 1.6 mi southwest of Cedarville.	a2.3	1966-77	7-12-77	4.3	51
01661430	Glebe Branch at Valley Lee, MD	Lat 38°11'40", long 76°31'13", St. Marys County, at upstream side of culvert on private road, 200 ft downstream from culvert on State Highway 244, 0.2 mi upstream from mouth, and 0.3 mi west of Valley Lee.	a.3	1968-77	3-22-77	3.2	9
		Monongahela River basin					
03075600	Toliver Run tributary near Hoyes Run, MD	Lat 39°29'39", long 79°25'14", Garrett County, at upstream side of culvert on Swallow Falls Road, 100 ft upstream from mouth, and 2.4 mi south of Hoyes Run.	.53	1965-77	4- 5-77	4.4	19
03078500	Big Piney Run near Salisbury, PA	Lat 39°43'34", long 79°02'55", Somerset County, 660 ft upstream from Little Piney Run, and 2.5 mi southeast of Salisbury.	24.5	1932-70‡, 1974-77	10- 9-76	3.68	581

* Also a low-flow partial-record station.
‡ Operated as a continuous-record station.
a Approximately.

Annual maximum discharge at crest-stage partial-record stations during water year 1977

Tidal crest-stage partial-record stations

The following table contains annual maximum stages for tidal crest-stage stations. The information is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above mean sea level, datum of 1929. Only the maximum stage is given. Information on some other high stages may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum stage at tidal crest-stage partial-record stations during water year 1977

Station No.	Station name	Location	Period of Record	Annual maximum: Date	Annual maximum: Elevation above mean sea level (ft)
		Smyrna River basin			
01483335	Duck Creek at Smyrna, DE	Lat 39°18'31", long 75°36'34", Kent County, at bridge on U.S. Highway 13, at north edge of Smyrna, 2 mi north of intersection of State Highway 300 and U.S. Highway 13 on downstream right wingwall of bridge.	1966-77	10- 9-76	3.83
		Murderkill River basin			
01484085	Murderkill River at Bowers, DE	Lat 39°03'30", long 75°23'51", Kent County, at Faulkner's Landing in Bowers, on left bank 10 ft southeast of southeast corner of restaurant on Faulkner's Pier.	1966-77	6- 9-77	5.49
		Cedar Creek basin			
01484235	Cedar Creek near Slaughter Beach, DE	Lat 38°56'06", long 75°19'26", Sussex County, at bridge No. S-164 on State Highway 36, 1.8 mi northwest of Slaughter Beach.	1966-77	6- 9-77	3.82
		Indian River basin			
01484595	Indian River at Oak Orchard, DE	Lat 38°35'45", long 75°10'24", Sussex County, at Hanes Landing 2.0 mi southeast of intersection of State Highways 24 and 5, at Oak Orchard.	1966-77	10- 9-76	3.77

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. All measurements in this table were made during periods of base flow, except as otherwise noted.

Discharge measurements made at miscellaneous sites during water year 1977

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements Date	 Discharge (ft³/s)
		Gunpowder River basin				
01581955 Gunpowder Falls	Gunpowder River	Lat 39°36'32", long 76°38'08", Baltimore County, at bridge on Big Falls Road, 2.0 mi northeast of Hereford, Md.	91.6	1975-76	1- 6-77	51
					2-14-77	126
					5- 2-77	94
					6-29-77	95
					7-19-77	56
					8-29-77	195
					9- 8-77	3.8
01583985 Gunpowder Falls	Gunpowder River	Lat 39°25'31", long 76°31'47", Baltimore County, at bridge on Cromwell Bridge Road, 0.5 mi northeast of Loch Raven, Md.	308	1975-76	1- 6-77	24
					2-22-77	36
					4-29-77	197
					7-19-77	3.8
					8-26-77	2.8
					9- 9-77	2.6
		Potomac River basin				
01598000 Savage River	North Branch Potomac River	Lat 39°29'00", long 79°04'24", Garrett County, 0.4 mi upstream from mouth, and 0.5 mi north of Bloomington, Md.	115	1905-6‡, 1924-27‡, 1929-50‡, 1975-76	3-16-77	574
					5- 2-77	17
					7-20-77	54
Potomac Blue Spring	North Branch Potomac	Lat 39°34'26", long 78°43'50", Allegany County, 200 ft below abandoned C&O Canal lock, 1.1 mi northwest of Spring Gap, Md.	--	1958-76	4-19-77	24
					8- 9-77	9.0
					9-13-77	9.3
Murley Branch	Murley Branch	Lat 39°39'38", long 78°37'08", Allegany County, below dam at spring house of farm on Williams Road, 4.0 mi southwest of Flintstone, Md.	--	1958-76	4-19-77	3.6
					8- 9-77	0.96
					9-13-77	1.0
Hoffman Drainage Tunnel	Braddock Run	Lat 39°38'18", long 78°53'38", Allegany County, upstream from State Highway 55, 0.5 mi southwest of Clarysville, and 2.1 mi southeast of Frostburg, Md.	--	1944, 1958-59, 1964, 1965, 1967-76	4-18-77	31
					8-10-77	12
					9-14-77	12
01601490 Braddock Run	Wills Creek	Lat 39°40'12", long 78°47'37", Allegany County, 0.2 mi upstream from mouth, and 2.0 mi northwest of Cumberland, Md.	17.5	1975-76	2- 9-77	15
					3-17-77	58
					7-20-77	18
01643580 Monocacy River	Potomac River	Lat 39°14'11", long 77°26'25", Frederick County, at bridge on State Highway 28, 1.9 mi northwest of Dickerson, Md., and 2.0 mi upstream from mouth.	968	1975-76	7-13-77	240
					9-14-77	102
01645080 Seneca Creek	Potomac River	Lat 39°05'28", long 77°19'47", Montgomery County, 50 ft upstream from Hooker Branch, 1.0 mi northeast of Seneca, Md., and 1.9 mi upstream from mouth.	128	1975-76	3-24-77	196
					5-17-77	54
					7-27-77	26
					9-14-77	11

‡ Operated as a continuous-record station.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

Water-quality partial-record stations are particular sites where chemical-quality, biological, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN

01477875 - CHRISTINA RIVER AT HUNTING HILLS, NEWARK, DE

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV 04...	1315	140	6.9	11.0	11.0	38	13	9.3	3.6	6.8	3.0	30

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV 04...	14	10	.1	18	88	80	1.9	.01	.05	.25	.30

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV 04...	.03	.02	1	<10	0	0	80	2	100	3	20

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01477875 CHRISTINA RIVER AT HUNTING HILLS, NEWARK, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1976 TO NOVEMBER 1976

DATE	NOV 4,76
TIME	1315
TOTAL COUNT	589
DIVERSITY: PHYLUM	0.1
.CLASS	0.1
..ORDER	1.4
...FAMILY	2.2
....GENUS	0.0
....GENUS-INSECTA	0.0

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..UNKNOWN ORDER	
...UNKNOWN FAMILY	
....UNKNOWN GENUS	2
ARTHROPODA (ARTHROPODS)	
.ARACHNOIDEA	
..HYDRACARINA	
...UNKNOWN FAMILY	
....UNKNOWN GENUS	3
.INSECTA	
..COLEOPTERA	
...ELMIDAE	
....OPTIOSERVUS	14
....OULIMNIUS	2
..DIPTERA	
...CHIRONOMIDAE	
....CONCHAPELOPIA	18
....ORTHOCLADIUS	37
....POLYPEDILUM	4
...EMPIDIDAE	
....HEMERODROMIA	1
...SIMULIIDAE	
....SIMULIUM	3
...TIPULIDAE	
....ANTOCHA	4
..EPHEMEROPTERA	
...EPHEMERELLIDAE	
....EPHEMERELLA	43
...HEPTAGENIIDAE	
....STENONEMA	12
...SIPHLONURIDAE	
....ISONYCHIA	1
..PLECOPTERA	
...UNKNOWN FAMILY	
....UNKNOWN GENUS	19
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	100
....HYDROPSYCHE	253
...HYDROPTILIDAE	
....LEUCOTRICHIA	1
...PHILOPOTAMIDAE	
....CHIMARRA	39
...UNKNOWN 118020305001000	30
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01477960 - CHRISTINA RIVER AT ROLLING GREEN, NEWARK, DE

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV 04...	1400	160	7.1	10.0	11.0	43	12	10	4.3	9.0	3.1	37

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUFNTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV 04...	16	12	.1	18	100	91	1.6	.01	.05	.28	.33

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV 04...	.10	.08	1	<10	0	0	270	4	150	4	20

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01477960 CHRISTINA RIVER AT ROLLING GREEN, NEWARK, DE
LAT 39-39-13 LONG 075-45-18 SEQ 00

NOV. 4, 1976
1400 HOURS

IDENTIFICATION OF BENTHIC INVERTEBRATES

275 COUNT

_ORGANISM__NAME	_COMMON__NAME	COUNT
ARTHROPODA		
.ARACHNOIDEA		
..HYDRACARINA	WATER MITES	
...UNKNOWN FAMILY		
....UNKNOWN GENUS		1
.INSECTA		
..COLEOPTERA	BEETLES	
...ELMIDAE	RIFFLE BEETLES	
....OPTIOSERVUS		1
..DIPTERA		
...CHIRONOMIDAE	MIDGES	
....CONCHAPELOPIA		1
....CRICOTOPUS		12
....ORTHOCLADIUS		4
....PHAENOPSECTRA		2
....THIENEMANNIELLA		3
...TIPULIDAE	CRANE FLIES	
....ANTOCHA		9
..EPHEMEROPTERA	MAY FLIES	
...EPHEMERELLIDAE		
....EPHEMERELLA		2
...HEPTAGENIIDAE		
....STENONEMA		31
...SIPHLONURIDAE		
....ISONYCHIA		7
..PLECOPTERA	STONEFLIES	
...UNKNOWN FAMILY		
....UNKNOWN GENUS		3
..TRICHOPTERA	CADDIS FLIES	
...HYDROPSYCHIDAE		
....CHEUMATOPSYCHE		44
....HYDROPSYCHE		143
...HYDROPTILIDAE		
....LEUCOTRICHIA		9
MOLLUSCA		
.GASTROPODA	SNAILS	
..BASOMMATOPHORA		
...ANCYLIDAE	FRESHWATER LIMPETS	
....FERRISSIA		1
PLATYHELMINTHES	FLATWORMS	
.TURBELLARIA		
..TRICLADIDA		
...UNKNOWN FAMILY		
....UNKNOWN GENUS		2

NOTE: ANALYSIS METHOD: STAIN & SCREEN, 50-X & 200-X MICROSCOPES
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.097
CLASS 0.131
ORDER 1.319
FAMILY 1.745
GENERA 2.427
INSECTA 1.205

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01478050 - CHRISTINA RIVER AT CHRISTIANA, DE.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
OCT 12...	1445	5.5	--	6.5	15.0	14.0	--
NOV 11...	1535	2.0	165	6.9	8.5	5.0	5.2
DEC 14...	1350	11	153	7.5	1.0	2.5	5.1
FEB 16...	0930	27	190	6.8	-1.0	.0	11.5
MAY 19...	0850	5.7	143	7.6	24.0	22.0	7.2
JUN 28...	0845	1.9	152	7.7	20.0	24.0	7.5
AUG 10...	1525	9.5	332	7.6	28.0	27.0	9.0
SEP 15...	0915	3.0	129	7.4	15.5	17.0	7.6

01478700 - WHITE CLAY CREEK BELOW NEWARK, DE

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
NOV 04...	0800	E73	265	7.7	8.5	11.8	85	34	21	8.0	7.3	5.0

DATE	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV 04...	63	27	13	.1	15	147	128	3.0	.03	.08	.47	.55

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV 04...	.06	.04	1	<10	0	0	40	2	70	5	410

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01478880 - TRIB. TO WHITE CLAY CR. NR. NEWARK, DEL.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
MAR 01...	1105	1.2	340	6.6	3.5	10.0	10	12.8	93
SEP 06...	1000	.66	166	6.8	28.5	22.0	15	7.6	60

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
MAR 01...	71	19	11	21	3.9	26	62	37	.1
SEP 06...	34	15	5.4	10	5.0	31	27	16	.2

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
MAR 01...	11	192	180	1.8	.06	3600	2000	490	490
SEP 06...	7.3	126	102	.96	.12	1000	200	140	110

01479955 - RED CLAY CREEK AT ASHLAND, DE

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
NOV 03...	1230	E20	390	7.5	10.0	9.2	110	41	26	11	26	6.7

DATE	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV 03...	85	61	24	.1	17	236	215	2.8	.06	.35	.55	.90

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV 03...	.12	.04	1	<10	0	20	80	3	120	4	600

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01480019 - RED CLAY CREEK AT STANTON, DE

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
NOV 04...	0915	E33	340	7.7	9.0	11.2	92	35	22	9.0	21	6.0

DATE	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV 04...	70	46	27	.1	17	197	183	2.3	.02	.09	.24	.33

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV 04...	.09	.05	1	<10	0	0	100	2	130	6	290

01481280 - BRANDYWINE CREEK AT SMITH BRIDGE, DE

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV 03...	1315	220	7.8	8.0	11.6	78	31	19	7.4	8.8	3.5	57

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV 03...	21	15	.1	13	130	116	2.2	.05	.15	.38	.53

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV 03...	.27	.22	1	<10	0	0	160	5	50	7	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01481490 - BRANDYWINE CR. AT HAGLEY MUSEUM, WILMINGTON, DE

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
NOV												
03...	0900	E377	225	7.5	8.0	12.4	75	25	18	7.2	9.2	4.3

DATE	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV												
03...	60	23	15	.1	13	133	120	2.0	.05	.20	.40	.60

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV											
03...	.17	.11	1	<10	0	10	90	1	80	6	10

01481550 - BRANDYWINE CR. BELOW ALAPOCAS RUN AT WILMINGTON, DE

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
NOV												
03...	1015	215	8.0	8.0	12.2	72	29	17	7.2	8.6	3.8	53

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
NOV											
03...	21	14	.1	13	125	111	1.9	.04	.10	.53	.63

DATE	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED CADMIUM (CD) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COBALT (CO) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED NICKEL (NI) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV											
03...	.15	.13	1	<10	0	10	160	2	70	6	0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01482310 - DOLL RUN AT RED LION, DEL.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
MAR 01...	1250	.68	198	6.4	9.5	6.5	0	11.8	56
SEP 06...	1230	.50	146	7.2	24.0	15.0	0	9.5	55

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
MAR 01...	45	11	6.9	9.3	2.6	13	24	21	.1
SEP 06...	44	11	6.7	8.4	2.5	14	19	20	.0

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
MAR 01...	12	112	94	4.0	.03	2400	100	70	220
SEP 06...	13	104	88	4.6	.01	210	60	60	50

01483170 - TRIB. TO DRAWYER CR. NR. ODESSA, DEL

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
MAR 02...	1040	1.7	145	6.7	3.0	3.5	10	11.2	48
SEP 07...	0820	1.8	142	7.4	28.0	17.5	10	9.0	55

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
MAR 02...	31	11	5.1	5.5	3.1	21	12	12	.1
SEP 07...	31	13	5.5	5.0	3.1	29	7.4	13	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
MAR 02...	14	107	74	4.8	.05	1500	330	140	130
SEP 07...	15	114	77	4.5	.04	1300	360	200	200

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01483348 - MILL CREEK NEAR SMYRNA, DEL.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
MAR									
02...	1135	1.5	150	6.4	8.0	4.5	5	11.0	50
SEP									
07...	1100	2.4	168	7.5	29.0	19.0	5	7.4	64

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DIS-SOL[illegible]D FLUORIDE (F) (MG/[illegible])
MAR									
02...	33	13	4.2	6.3	2.5	20	24	13	.1
SEP									
07...	52	19	4.0	4.8	3.7	14	41	12	.2

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
MAR									
02...	17	105	90	2.5	.09	850	360	110	100
SEP									
07...	17	132	109	1.2	.11	1400	300	370	370

01483500 - LEIPSIC RIVER NEAR CHESWOLD, DEL.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
OCT									
19...	1040	4.5	372	6.9	7.5	7.0	6	10.5	81
MAR									
02...	1245	7.9	190	7.7	11.5	5.5	0	11.2	63
SEP									
07...	1400	3.9	253	8.1	26.0	20.0	10	8.7	90

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT									
19...	29	23	5.6	40	4.2	63	25	67	.1
MAR									
02...	34	17	4.9	9.9	2.7	35	26	16	.1
SEP									
07...	46	27	5.6	18	4.3	54	34	31	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT									
19...	26	239	222	2.7	.09	370	120	30	30
MAR									
02...	20	139	114	3.1	.10	650	130	70	60
SEP									
07...	26	197	173	2.5	.16	480	210	50	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01483675 - CAHOON BRANCH AT DOVER, DEL.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
OCT 19...	1300	1.0	148	6.4	8.5	8.0	13	11.4	29
MAR 03...	1150	4.9	100	7.0	12.0	5.5	0	11.4	17
SEP 12...	1300	.25	120	7.1	30.0	15.0	30	9.7	36

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT 19...	0	5.3	3.2	14	3.0	39	8.6	13	.1
MAR 03...	8	2.7	2.4	8.5	2.1	10	10	11	.0
SEP 12...	19	8.3	3.6	9.0	3.5	20	21	12	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
OCT 19...	24	103	92	2.4	.27	410	200	30	20
MAR 03...	17	76	59	2.2	.08	480	40	50	40
SEP 12...	24	114	92	1.9	.15	780	270	60	0

01484050 - PRATT BRANCH NEAR FELTON, DEL.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
FEB 22...	1355	1.8	127	7.2	11.5	15.0	5	10.4	38
SEP 13...	1310	.90	141	7.0	28.5	16.5	5	8.9	36

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
FEB 22...	29	8.0	4.3	7.5	2.0	10	17	12	.0
SEP 13...	23	<8.0	4.0	7.7	2.3	17	18	12	.0

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
FEB 22...	19	90	75	4.2	.03	180	60	40	40
SEP 13...	21	90	82	3.6	.05	280	290	40	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01490600 - MEREDITH BRANCH NEAR SANDTOWN, DEL.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)
MAR 03...	1430	6.4	98	6.6	14.0	7.5	50	11.7	22
SEP 12...	1500	1.1	96	7.4	29.5	18.0	50	9.2	28

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
MAR 03...	13	4.5	2.5	7.0	2.4	10	20	9.1	.1
SEP 12...	16	6.7	2.7	5.0	3.2	14	14	8.6	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)
MAR 03...	19	99	70	.94	.05	1500	190	60	40
SEP 12...	16	82	64	1.4	.08	2000	600	70	70

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GROUND-WATER LEVELS

DELAWARE

KENT COUNTY

391026075304901. Local number, Id 55-1.
LOCATION.--Lat 39°10'26", long 75°30'49", Hydrologic Unit 02040207, White Oak Road at Dover.
Owner: City of Dover.
AQUIFER.--Piney Point.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2.5 in (0.06 m), depth 349 ft (106 m), cased to 329 ft (100 m), screened 329 to 349 ft (100 to 106 m).
DATUM.--Altitude of land-surface datum is 20 ft (6.1 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--Water level affected by pumping in the Dover area.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 67.40 ft (20.54 m) below land-surface datum, May 5, 1970; lowest, 143.0 ft (43.59 m) below land-surface datum, Sept. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	126.2	123.2	.....	e123.0	e127.5	125.7	124.7	125.2	128.5	132.0	138.6	143.0
10	126.6	122.8	.....	123.4	127.8	126.2	124.0	125.6	128.6	134.0	139.8	142.8
15	125.6	122.6	124.8	124.2	126.8	125.3	123.8	125.8	128.2	135.1	141.2	142.2
20	125.1	.....	125.6	124.5	127.1	125.4	124.1	126.6	129.0	137.7	141.5	141.7
25	124.4	.....	125.6	125.2	126.0	126.0	124.7	128.2	130.5	139.7	141.5	141.9
EOM	123.6	122.6	123.6	e126.9	125.8	125.6	e125.2	.....	131.8	139.4	142.2	141.3

WTR YEAR 1977 MAX 122.1 NOV 30, 1976 MIN 143.0 SEP 6, 1977

e Estimated.

390935075320001. Local number, Jd 14-1.
LOCATION.--Lat 39°09'35", long 75°32'00", Hydrologic Unit 02040207, Division Street at Dover.
Owner: City of Dover.
AQUIFER.--Cheswold.
WELL CHARACTERISTICS.--Drilled former public supply well, diameter 12 in (0.30 m), depth 227 ft (69.2 m) cased to 195 ft (59.4 m), screened 195 to 227 ft (59.4 to 69.2 m).
DATUM.--Altitude of land-surface datum is 35 ft (10.7 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--Water level affected by pumping in the Dover area.
PERIOD OF RECORD.--August 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 91.05 ft (27.75 m) below land-surface datum, Nov. 28, 1976; lowest, 131.4 ft (40.05 m) below land-surface datum, Sept. 2, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	107.8	97.89	91.07	102.5	108.8	108.5	108.6	111.1	114.3	114.6	119.0	.....
10	106.8	96.98	93.65	105.2	110.1	108.7	107.3	109.8	115.1	114.9	121.9	.....
15	108.6	94.01	94.54	107.8	110.4	108.7	109.0	110.2	115.3	115.7	124.3	.....
20	102.1	94.80	93.31	109.1	108.1	107.3	109.4	113.0	113.4	117.3	.....	.....
25	97.70	91.94	92.82	107.4	109.4	109.5	109.8	113.9	114.4	118.1	.....	113.6
EOM	96.01	91.07	96.12	107.4	108.2	109.9	109.8	114.2	115.7	117.2	117.7	111.9

WTR YEAR 1977 MAX 91.05 NOV 28, 1976 MIN 124.5 AUG 15, 1977

390607075331501. Local number, Jd 42-3.
LOCATION.--Lat 39°06'07", long 75°33'15", Hydrologic Unit 02040207, 1 mi (1.6 km) south of Camden.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1.25 in (0.03 m), depth 11 ft (3.4 m), well point 8.5 to 11 ft (2.6 to 3.4 m).
DATUM.--Altitude of land-surface datum is about 44 ft (13.4 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--This is a replacement well and is located 2 ft (0.6 m) north of the original well. The measurements published in WSP 1782, for the years 1958-61 for the original well, are doubtful.
PERIOD OF RECORD.--October 1950 to December 1961, August 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.69 ft (0.82 m) below land-surface datum, July 18, 1975; lowest measured, 9.16 ft (2.79 m) below land-surface datum, Oct. 30, 1951.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	7.39	DEC 21	7.41	FEB 23	7.95	APR 25	7.89	JUN 23	8.35	AUG 23	9.12
NOV 18	7.14	JAN 24	7.34	MAR 23	7.64	MAY 23	8.14	JUL 22	8.89	SEP 22	9.13
24	7.25										

DELAWARE--Continued

KENT COUNTY--Continued

385041075395601. Local number, Mc 51-1.
LOCATION.--Lat 38°50'41", long 75°39'56", Hydrologic Unit 02060008, 1.3 mi (2.1 km) northeast of Adamsville.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 19 ft (5.8 m), well point 15 to 19 ft (4.6 to 5.8 m).
DATUM.--Altitude of land-surface datum is about 55 ft (16.8 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--This is a replacement well and is located about 60 ft (18.3 m) north of original well.
PERIOD OF RECORD.--September 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.52 ft (1.38 m) below land-surface datum, July 16, 1975; lowest measured, 15.29 ft (4.66 m) below land-surface datum, Sept. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	14.14	JAN 20	14.97	APR 8	13.39	JUN 16	14.02	SEP 6	15.29		
DEC 8	13.58	FEB 15	13.59	MAY 18	13.55	AUG 2	14.78				

385310075331301. Local number, Md 22-1.
LOCATION.--Lat 38°53'10", long 75°33'13", Hydrologic Unit 02040207, 2.4 mi (3.9 km) west of Williamsville.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 17 ft (5.2 m), well point 14 to 17 ft (4.3 to 5.2 m).
DATUM.--Altitude of land-surface datum is about 58 ft (17.7 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft (0.33 m) below land-surface datum, July 14, 1975; lowest measured, 11.14 ft (3.40 m) below land-surface datum, Jan. 6, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	4.71	JAN 18	4.03	APR 8	3.72	JUN 22	7.78	SEP 12	9.76		
DEC 8	4.33	FEB 15	5.50	MAY 13	5.85	AUG 17	9.79				

NEW CASTLE COUNTY

393854075415401. Local number, Db 24-10.
LOCATION.--Lat 39°38'54", long 75°41'54", Hydrologic Unit 02040205, 2 mi (3.2 km) south of Ogletown.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 24 ft (7.3 m), well point 21 to 24 ft (6.4 to 7.3 m).
DATUM.--Altitude of land-surface datum is about 77 ft (23.5 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--August 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.88 ft (1.49 m) below land-surface datum, May 12, 1958; lowest measured, 17.43 ft (5.31 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	13.41	DEC 9	13.32	FEB 16	14.23	MAY 5	13.94	AUG 8	13.65	SEP 15	14.20
NOV 11	12.94	JAN 13	13.80	APR 4	14.09	JUN 28	14.17	11	13.70		

DELAWARE--Continued

NEW CASTLE COUNTY--Continued

393755075364802. Local number, Dc 34-6.
LOCATION.--Lat 39°37'55", long 75°36'48", Hydrologic Unit 02040205, at Delaware National Guard Rifle Range, New Castle.
Owner: Delaware Geological Survey.
AQUIFER.--Upper Potomac.
WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in (0.15 m) to 43 ft (13.1 m), 2 in (0.05 m) to 190 ft (57.9 m), depth 190 ft (57.9 m), screened 183 to 188 ft (55.8 to 57.3 m).
REMARKS.--Water level subject to tidal fluctuation.
DATUM.--Altitude of land-surface datum is 28 ft (8.5 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--November 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.30 ft (11.98 m) below land-surface datum, Feb. 2, 1976; lowest, 52.36 ft (14.34 m) below land-surface datum, Sept. 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.57	44.23	47.42	47.00	47.70	47.40	47.97	49.35	50.66	50.80	49.95	.....
10	46.71	44.45	48.10	46.70	48.40	49.40	49.60	50.40	50.55	50.55	49.85	50.65
15	45.68	44.40	46.30	47.10	47.60	49.05	49.30	50.08	49.95	50.45	50.54	51.00
20	44.46	44.60	44.65	47.45	48.27	48.63	49.25	50.48	48.90	49.30	50.20	52.45
25	44.10	46.18	46.08	47.57	48.00	49.70	48.95	50.72	50.45	49.96	50.38	51.32
EOM	44.50	47.50	47.42	47.93	48.15	48.10	49.30	50.23	50.10	49.50	50.60	52.30

WTR YEAR 1977 MAX 43.58 OCT 18, 1976 MIN 52.36 SEP 30, 1977

391949075410701. Local number, Hb 14-1.
LOCATION.--Lat 39°19'49", long 75°41'07", Hydrologic Unit 02040205, at Prices Corners.
Owner: Delaware Department of Highways and Transporation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 19 ft (5.8 m), well point 16 to 19 ft (4.9 to 5.8 m).
DATUM.--Altitude of land-surface datum is about 72 ft (21.9 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--October 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.49 ft (0.45 m) below land-surface datum, Apr. 7, 1958; lowest measured, 11.95 ft (3.64 m) below land-surface datum, Aug. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	9.02	JAN 13	9.28	MAR 29	8.51	JUN 21	9.40	SEP 14	9.11		
DEC 9	9.22	FEB 14	9.36	MAY 10	8.71	AUG 19	10.01				

SUSSEX COUNTY

384930075370201. Local number, Nc 13-3.
LOCATION.--Lat 38°49'30", long 75°37'02", Hydrologic Unit 02060008, 2.0 mi (3.2 km) northwest of Greenwood.
Owner: University of Delaware.
AQUIFER.--Piney Point.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (0.15 m), depth 630 ft (192 m), cased to 620 ft (189 m), screened 620 to 630 ft (189 to 192 m).
DATUM.--Land surface datum is 62.5 ft (19.1 m) above mean sea level. Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.
PERIOD OF RECORD.--December 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.70 ft (21.24 m) below land-surface datum, Jan. 1, 1971; lowest, 78.16 ft (23.82 m) below land-surface datum, Sept. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	76.10	.....	76.48	76.42	76.31	76.69	76.56	.....	77.28	77.61	77.86	78.03
10	76.02	.....	76.42	76.00	76.69	76.91	77.08	.....	.....	77.70	77.89	77.89
15	76.02	76.14	76.30	76.29	76.66	76.78	.....	.....	77.47	77.76	77.93	78.14
20	.....	76.09	76.11	76.36	76.53	76.80	.....	.....	77.37	77.68	77.90	77.91
25	.....	76.29	76.33	76.30	76.51	76.87	.....	.....	77.46	77.81	78.01	78.02
EOM	.....	76.37	76.25	76.46	76.73	76.81	.....	.....	77.57	77.78	78.06	78.10

WTR YEAR 1977 MAX 75.69 OCT 9, 1976 MIN 78.16 SEP 16, 1977

DELAWARE--Continued

SUSSEX COUNTY--Continued

384639075353101. Local number, Nc 45-1.
LOCATION.--Lat 38°46'39", long 75°35'31", Hydrologic Unit 02060008, 2.0 mi (3.2 km) south of Greenwood.
Owner: P. H. Cannon.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 in (0.03 m), depth 15 ft (4.6 m), screened 14 to 15 ft (4.3 to 4.6 m).
DATUM.--Altitude of land-surface datum is about 43 ft (13.1 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--October 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.67 ft (2.03 m) below land-surface datum, Jan. 30, 1952; lowest measured, 14.48 ft (4.41 m) below land-surface datum, Nov. 18, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	13.77	DEC 10	12.75	FEB 18	12.92	MAY 18	13.01	AUG 17	14.22		
NOV 3	12.92	JAN 21	12.30	MAR 31	12.54	JUN 15	13.30	SEP 14	14.20		

384955075192801. Local number, Ng 11-1.
LOCATION.--Lat 38°49'55", long 75°19'28", Hydrologic Unit 02040207, 1.2 mi (1.9 km) east of Jefferson Crossroads.
Owner: Delaware Department of Highways and Transporation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 19 ft (5.8 m), well point 16 to 19 ft (4.9 to 5.8 m).
DATUM.--Altitude of land-surface datum is 24 ft (7.3 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.43 ft (2.75 m) below land-surface datum, July 17, 1975; lowest measured, 14.64 ft (4.46 m) below land-surface datum, Jan. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	11.28	DEC 8	11.47	FEB 14	11.72	MAY 13	12.13	AUG 3	13.34		
26	10.86	JAN 20	11.20	APR 1	11.81	JUN 22	12.67	SEP 12	13.69		

383730075213501. Local number, Pf 24-2.
LOCATION.--Lat 38°37'30", long 75°21'35", Hydrologic Unit 02060010, 1.5 mi (2.4 km) southwest of Stockley.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), depth 49 ft (14.9 m), cased to 46 ft (14.0 m), screened 46 to 49 ft (14.0 to 14.9 m).
DATUM.--Altitude of land-surface datum is about 50 ft (15.2 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--January 1970 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.11 ft (2.17 m) below land-surface datum, Dec. 25, 1972; lowest, 11.98 ft (3.65 m) below land-surface datum, Sept. 5, 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.23	9.37	9.86	9.40	9.26	9.12	9.00	9.40	10.13	11.02	11.74	11.98
10	10.92	9.48	9.40	9.20	9.43	9.10	9.02	9.51	10.20	11.12	11.82	11.54
15	10.77	9.50	9.33	8.85	9.48	9.11	9.07	9.70	10.36	11.19	11.82	11.44
20	10.75	9.62	9.26	8.82	9.51	9.15	9.20	9.79	10.44	11.27	11.83	11.46
25	9.75	9.74	9.30	8.92	9.42	9.05	9.22	9.92	e10.67	11.45	11.85	11.51
EOM	9.42	9.80	9.32	9.24	9.28	9.08	9.36	9.99	10.80	11.64	11.93	e11.54

WTR YEAR 1977 MAX 7.78 JAN 18, 1977 MIN 11.98 SEP 5, 6, 1977

e Estimated.

383138075260201. Local number, Qe 44-1.
LOCATION.--Lat 38°31'38", long 75°26'02", Hydrologic Unit 02060008, 1.0 mi (1.6 km) east of Whaleys Crossroads.
Owner: Delaware Department of Highways and Transportation.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 25 ft (7.6 m), well point 22 to 25 ft (6.7 to 7.6 m).
DATUM.--Altitude of land-surface datum is about 50 ft (15.2 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--September 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.99 ft (1.52 m) below land-surface datum, Mar. 20, 1963; lowest measured, 12.18 ft (3.71 m) below land-surface datum, Oct. 16, 1962, Sept. 8, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	7.12	JAN 18	6.92	MAR 31	6.93	JUN 20	9.16	SEP 19	11.06		
DEC 9	9.26	FEB 17	7.41	MAY 10	7.97	AUG 15	11.16				

MARYLAND

ALLEGANY COUNTY

394024078273401. Local number, All-Ah 1.

LOCATION.--Lat 39°40'24", long 78°27'34", Hydrologic Unit 02070003, on Fifteen Mile Creek, 2.8 mi (4.5 km) southeast of Pratt.

Owner: Green Ridge State Forest.

AQUIFER.--Jennings Formation.

WELL CHARACTERISTICS.--Drilled unused artesian (?) well, diameter 8 in (0.20 m), reported depth 300 ft (91.4 m), measured depth 113 ft (34.4 m), cased to unknown depth, open hole.

DATUM.--Altitude of land-surface datum is 720 ft (219 m). Measuring point: Top of sanitary seal in casing, 0.3 ft (0.09 m) above land-surface datum.

REMARKS.--Water level was deeper than 40 ft (12 m) below land-surface datum on Nov. 19, 1969, and Feb. 12, 1970, when well was being pumped.

PERIOD OF RECORD.--December 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.88 ft (0.57 m) below land-surface datum, Jan. 2, 1976; lowest measured, 22.80 ft (6.95 m) below land-surface datum, July 16, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR October 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	2.60	JAN 4	4.15	APR 6	2.10	JUL 12	5.75				
NOV 17	3.41	FEB 21	4.20	MAY 26	4.67	AUG 17	4.55				

ANNE ARUNDEL COUNTY

391208076353501. Local number, AA-Ad 10.

LOCATION.--Lat 39°12'08", long 76°35'35", Hydrologic Unit 02060003, at Curtis Bay.

Owner: U.S. Army Reserve Center.

AQUIFER.--Patapsco Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 109 ft (33.2 m), length of casing and position of screen unknown.

DATUM.--Altitude of land-surface datum is 45 ft (14 m). Measuring point: Top of casing, 1.0 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--August 1944, January 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.96 ft (9.13 m) below land-surface datum, June 18, 1953; lowest measured, 36.56 ft (11.14 m) below land-surface datum, Apr. 21, 1944.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 8	32.45	FEB 18	33.08	MAY 13	32.88	AUG 12	33.37				
DEC 30	32.90	APR 12	33.08	JUL 11	33.30						

390303076463201. Local number, AA-Cb 1.

LOCATION.--Lat 39°03'03", long 76°46'32", Hydrologic Unit 02060006, on Duvall Bridge Rd., Fort George G. Meade.

Owner: U.S. Army.

AQUIFER.--Patuxent Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 505 ft (153.9 m), cased to 485 ft (147.8 m), screened 485 to 505 ft (147.8 to 153.9 m).

DATUM.--Altitude of land-surface datum is 126 ft (38 m). Measuring point: Top lip of 3 in (0.08 m) extension pipe, 3.35 ft (1.02 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder during many periods.

PERIOD OF RECORD.--March 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.60 ft (12.37 m) below land-surface datum, May 1, 1962; lowest measured, 71.69 ft (21.85 m) below land-surface datum, Aug. 14, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	64.56	FEB 11	64.28	MAY 2	66.64	JUL 25	70.79	AUG 22	71.22		
DEC 27	65.86	APR 4	65.11	JUN 13	68.55	AUG 14	71.69				

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

390423076432001. Local number, AA-Cc 40.
LOCATION.--Lat 39°04'23" long 76°43'20", Hydrologic Unit 02060006, on Rifle Range Rd., Fort George G. Meade.
Owner: U.S. Army.
AQUIFER.--Patapsco Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 238 ft (72.5 m), cased to 208 ft (63.4 m), screened 208 to 238 ft (63.4 to 72.5 m).
DATUM.--Altitude of land-surface datum is 138 ft (42 m). Measuring point: Top of 1.5 in (0.04 m) coupling, 1.7 ft (0.52 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Dec. 4, 1959, to July 21, 1960.
PERIOD OF RECORD.--December 1959 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft (12.98 m) below land-surface datum, Mar. 25, 1961; lowest measured, 49.22 ft (15.00 m), June 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	46.46	DEC 27	45.69	APR 4	46.48	JUN 13	47.00	AUG 22	47.90		
NOV 12	46.46	FEB 11	46.48	MAY 2	46.63	JUL 25	47.72				

BALTIMORE CITY

391617076322001. Local number, 2S5E-1.
LOCATION.--Lat 39°16'17", long 76°32'20", Hydrologic Unit 02060003, near Holabird Avenue and Pumphrey Street, at Fort Holabird, Baltimore.
Owner: U.S. Army.
AQUIFER.--Patuxent Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (0.30 m), depth 290 ft (88.4 m), length of casing and position of screen unknown.
DATUM.--Altitude of land-surface datum is 30 ft (9.1 m). Measuring point: Top of casing, 1.8 ft (0.55 m) above land-surface datum.
PERIOD OF RECORD.--1934, April 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.15 ft (13.15 m) below land-surface datum, Sept. 27, 1976; lowest measured, 103.70 ft (31.61 m), Oct. 15, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 8	64.07	FEB 18	68.55	MAY 13	69.21	AUG 12	73.47				
DEC 30	63.28	APR 12	67.20	JUL 11	70.18						

BALTIMORE COUNTY

393102076341801. Local number, Bal-Ce 21.
LOCATION.--Lat 39°31'02", long 76°34'18", Hydrologic Unit 02060003, on Paper Mill Rd, about 0.2 mi (0.3 km) west of Jacksonville.
Owner: Baltimore County.
AQUIFER.--Loch Raven Schist (Wissahickon Group), revised.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 to 6 in (0.25 to 0.15 m), depth 350 ft (106.7 m), cased to 33 ft (10.1 m), open hole.
DATUM.--Altitude of land-surface datum is 536 ft (163 m). Measuring point: Top of casing, 2 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--November and December 1955, November 1956 through September 1975, July 1977 through September 1977.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.60 ft (3.84 m) below land-surface datum, June 23, 1972; lowest measured, 21.54 ft (6.57 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19	18.62	AUG 29	19.50								

MARYLAND--Continued

CALVERT COUNTY

381954076272101. Local number, Cal-Gd 5.
LOCATION.--Lat 38°19'54", long 76°27'21", Hydrologic Unit 02060006, at the Lord Calvert Yacht Club, about 0.5 mi (0.8 km) northeast of Solomons.
Owner: Calvert Marina.
AQUIFER.--Piney Point Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), depth 248 ft (75.6 m), cased to 233 ft (71.0 m), screened 233 to 248 ft (71.0 to 75.6 m).
DATUM.--Altitude of land-surface datum is 10 ft (3.0 m). Measuring point: Top of hole in domed cap, 3.7 ft (1.13 m) below land-surface datum.
REMARKS.--Equipped with water-stage recorder Oct. 14, 1949, to Dec. 3, 1957.
PERIOD OF RECORD.--1942, January 1944, October 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, 15 ft (4.6 m) below land-surface datum, 1942; lowest measured, 56.5 ft (17.2 m) below land-surface datum, Jan. 15, 1944.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	30.25	FEB 8	31.03	MAY 3	29.23	JUL 27	32.13				
JAN 3	28.39	MAR 29	27.96	JUN 14	30.19	AUG 24	32.71				

381952076270901. Local number, Cal-Gd 6.
LOCATION.--Lat 38°19'52", long 76°27'09", Hydrologic Unit 02060006, at the Lord Calvert Yacht Club, about 0.5 mi (0.8 km) northeast of Solomons.
Owner: Calvert Marina.
AQUIFER.--Aquia Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 493 ft (150.3 m), cased to 472 ft (143.9 m), screened 469 to 493 ft (143.0 to 150.3 m).
DATUM.--Altitude of land-surface datum is 10 ft (3.0 m). Measuring point: Top of pump base, 10 ft (3.0 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Oct. 19, 1949, to Feb. 25, 1960.
PERIOD OF RECORD.--1942, January 1944, October 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, at land-surface datum, 1942; lowest measured, 58.9 ft (17.95 m) below land-surface datum, Jan. 13, 1944.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	47.45	JAN 3	46.77	MAR 29	46.96	JUN 14	48.84	AUG 24	51.69		
NOV 16	47.89	FEB 8	42.21	MAY 3	47.52	JUL 27	50.95				

CARROLL COUNTY

393638076510001. Local number, Car-Bf 1.
LOCATION.--Lat 39°36'38", long 76°51'00", Hydrologic Unit 02060003, on Hillcrest Street, Hampstead.
Owner: Town of Hampstead.
AQUIFER.--Prettyboy Schist (Wissahickon Group).
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 407 ft (124.1 m), cased to about 65 ft (19.8 m), open hole.
DATUM.--Altitude of land-surface datum is 933 ft (284 m). Measuring point: Top of casing, 2.35 ft (0.72 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Apr. 15, 1952, to Nov. 7, 1962.
PERIOD OF RECORD.--September and December 1946, April and September 1947, February 1949 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.30 ft (15.94 m) below land-surface datum, May 13, 1952; lowest measured, 76.26 ft (23.24 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	70.55	DEC 27	70.30	MAR 25	71.80	JUL 18	69.30				
NOV 19	69.17	FEB 10	71.65	MAY 9	64.31	AUG 24	71.09				

CHARLES COUNTY

383422077114601. Local number, Ch-Cb 7.
LOCATION.--Lat 38°34'22", long 77°11'46", Hydrologic Unit 02070011, at Caffee and Greenslade Roads, about 2.5 mi (4.0 km) southwest of Indian Head.
Owner: U.S. Navy: Naval Ordnance Station.
AQUIFER.--Patapsco Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 400 ft (121.9 m), cased to 400 ft (121.9 m), screened 154 to 167 ft (46.9 to 50.9 m).
DATUM.--Altitude of land-surface datum is 36 ft (11 m). Measuring point: Top of casing at land-surface datum.
REMARKS.--Equipped with water-stage recorder Sept. 21, 1953, to July 8, 1965.
PERIOD OF RECORD.--March and April 1952, August 1953 to current year.
EXTREMES FOR PERIOD OF RECORD.--Higest water level measured, 57.35 ft (17.48 m) below land-surface datum, Apr. 18, 1952; lowest measured, 88.58 ft (27.00 m) below land-surface datum, Oct. 22, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	72.50	JAN 5	77.26	MAR 30	80.46	JUN 16	76.25	AUG 25	76.27		
NOV 18	73.06	FEB 9	80.70	MAY 4	78.34	JUL 29	76.18				

MARYLAND--Continued

DORCHESTER COUNTY

383346076030301. Local number, Dor-Ce 21.
LOCATION.--Lat 38°33'46", long 76°03'03", Hydrologic Unit 02060005, on Shoal Creek about 1.5 mi (2.4 km) southeast of Cambridge.
Owner: Eastern Shore State Hospital.
AQUIFER.--Piney Point Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 4.5 in (0.20 to 0.11 m), depth 368 ft (112.2 m), cased to 368 ft (112.2 m).
DATUM.--Altitude of land-surface datum is 12 ft (3.7 m). Measuring point: Top casing at land-surface datum.
REMARKS.--Equipped with water-stage recorder Aug. 23, 1956, to Nov. 6, 1958, and Sept. 11, 1965, to Oct. 13, 1966.
PERIOD OF RECORD.--August 1914, February 1952, August 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, 14 ft (4.3 m) below land-surface datum, August 1914; lowest measured, 137.49 ft (41.91 m) below land-surface datum, Feb. 8, 1962, affected by pumpage of nearby well.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 9	86.36	JAN 5	82.90	APR 7	83.08	JUN 6	79.24	AUG 4	80.86		
DEC 10	86.12	FEB 7	86.40	MAY 10	84.50	27	80.01	SEP 15	79.11		

GARRETT COUNTY

394016078581601. Local number, Gar-Ag 1.
LOCATION.--Lat 39°40'16", long 78°58'16", Hydrologic Unit 02070002, in the Savage River valley, 2.5 mi (4.0 km) northwest of Frostburg.
Owner: Town of Frostburg.
AQUIFER.--Pocono Sandstone or Greenbrier Limestone.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 30 ft (9.1 m), cased to unknown depth, open hole.
DATUM.--Altitude of land surface datum is 2,530 ft (771 m). Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--October 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.71 ft (1.74 m) below land-surface datum, Jan. 14, 1950; lowest measured, 9.37 ft (2.86 m) below land-surface datum, Nov. 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	6.71	JAN 4	6.85	FEB 22	7.23	APR 25	6.70	JUN 23	6.93	AUG 24	7.30
NOV 19	6.75	JAN 24	6.89	MAR 21	6.60	MAY 23	6.82	JUL 22	7.10	SEP 21	7.52
DEC 23	6.79										

HARFORD COUNTY

392343076161901. Local number, Har-Ed 24.
LOCATION.--Lat 39°23'43", long 76°16'19", Hydrologic Unit 02060003, at Bush River Road and 29th Street, about 2 mi (3.2 km) southeast of Edgewood.
Owner: U.S. Army: Edgewood Arsenal.
AQUIFER.--Patapsco Formation.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 10 in (0.46 to 0.25 m), depth 149 ft (45.4 m), cased to 120 ft (36.6 m), screened 120 to 135 ft (36.6 to 41.1 m).
DATUM.--Altitude of land-surface datum is 13 ft (4.0 m). Measuring point: Top of casing, 1.15 ft (0.35 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Jan. 24, 1950, to June 6, 1961.
PERIOD OF RECORD.--April 1944, September 1949, January 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.24 ft (2.51 m) below land-surface datum, Apr. 13, 1944; lowest measured, 38.40 ft (11.70 m) below land-surface datum, Apr. 23, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	10.00	DEC 27	10.01	MAR 24	10.49	JUN 15	8.33				
NOV 29	10.04	FEB 8	10.75	MAY 5	9.75	SEP 6	10.15				

MONTGOMERY COUNTY

390434076573002. Local number, Mont-Eh 20.
LOCATION.--Lat 39°04'34", long 76°57'30", Hydrologic Unit 02070010, at Sate Highway 196 and Fairland Road, Fairland.
Owner: Cities Service Oil Co.
AQUIFER.--Wissahickon Group.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5.6 in (0.14 m), depth 103 ft (31.4 m), cased to 50 ft (15.2 m), open hole.
DATUM.--Altitude of land-surface datum is 410 ft (125 m). Measuring point: West side of bell housing at inside of lip at land-surface datum.
PERIOD OF RECORD.--March 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft (1.34 m) below land-surface datum, June 25, 1972; lowest measured, 14.88 ft (4.54 m) below land-surface datum, Sept. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.91	JAN 25	12.34	MAR 24	10.90	MAY 24	13.13	JUN 24	13.74	AUG 24	14.20
NOV 24	11.83	FEB 24	12.70	APR 25	12.01	JUN 15	13.26	JUL 22	13.91	SEP 26	14.88
DEC 23	11.86										

WASHINGTON COUNTY

393638078001301. Local number, Wa-Be 2.
LOCATION.--Lat 39°36'38", long 78°00'13", Hydrologic Unit 02070004, about 1.2 mi (1.9 km) southeast of Big Pool.
Owner: Fort Frederick State Park.
AQUIFER.--Romney Shale.
WELL CHARACTERISTICS.--Dug unused water-table well, diameter 42 in (1.07 m), depth 43 ft (13.1 m), cribbed with stone.
DATUM.--Altitude of land-surface datum is 470 ft (143 m). Measuring point: Top of stone sill, 0.8 ft (0.24 m) above land-surface datum.
PERIOD OF RECORD.--December 1949, June 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.90 ft (5.46 m) below land-surface datum, May 15, 1972; lowest measured, 36.92 ft (11.25 m) below land-surface datum, Jan. 11, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	30.75	JAN 4	31.72	APR 12	23.23	JUL 12	34.24				
NOV 17	25.80	FEB 21	34.10	MAY 26	30.45	AUG 23	35.07				

WICOMICO COUNTY

382037075310801. Local number, Wi-Cf 3.
LOCATION.--Lat 38°20'37", long 75°31'08", Hydrologic Unit 02060007, on Airport Road, about 5 mi (8.0 km) southeast of Salisbury.
Owner: Salisbury Wicomico Airport.
AQUIFER.--Columbia Deposits.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m), depth 109 ft (33.2 m), cased to 90 ft (27.4 m), screened 90 to 108 ft (27.4 to 32.9 m).
DATUM.--Altitude of land-surface datum is 45 ft (14 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.
REMARKS.--Equipped with water-stage recorder Aug. 2, 1949, to Apr. 11, 1960, and Aug. 29, 1963, to Aug. 20, 1968.
PERIOD OF RECORD.--October 1942, September 1947 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft (0.58 m) below land-surface datum, May 7, 1958; lowest measured, 13.44 ft (4.10 m) below land-surface datum, Sept. 18, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	6.06	JAN 4	6.29	MAR 30	6.60	JUN 20	8.37	SEP 19	9.29		
DEC 10	5.43	FEB 17	7.21	MAY 12	7.53	AUG 15	9.18				

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE MSL)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	AIR TEMPER-ATURE (DEG C)	TEMPER-ATURE (DEG C)
KENT COUNTY, DELAWARE									
ID53 6	391021075323601	112CLMB	76-12-21	51	40.00	58	4.7	-3.0	14.0
		112CLMB	77-01-14	51	40.00	95	4.4	-1.0	14.5
JD14 16	390914075311001	122CSLD	76-10-13	200	5.00	342	7.8	--	15.0
SUSSEX COUNTY									
NI51 26	384514075090101	122PCMK	77-03-18	156	22.00	135	5.5	14.0	14.0
OI35 27	384211075050601	122MNKN	76-10-13	248	18.00	177	5.2	--	14.5
		122MNKN	76-10-15	248	18.00	169	5.2	--	14.5
PF24 02 37160	383730075213501	112CLMB	76-11-05	49	50.00	38	4.7	--	14.5
PF24 03 37160	383730075213502	122MNKN	76-11-05	178	50.00	90	5.7	--	14.5
RJ22 05 037927	382808075030501	122MNKN	77-05-11	455	5.00	1720	7.0	20.0	18.0
RJ22 06 037927	382808075030502	122MNKN	77-05-11	295	5.00	230	6.3	27.0	17.5
RJ22 07 037927	382808075030503	122PCMK	77-05-11	185	5.00	420	6.8	22.5	--
RJ22 08 037927	382808075030504	112CLMB	77-05-11	115	5.00	23000	6.7	24.0	16.0
ANNE ARUNDEL COUNTY, MARYLAND									
BF 57 736882	390802076284301	217PPSC	77-04-22	290	80.00	42	4.8	--	13.5
CC 114 735837	390254076413001	217PTXN	76-10-28	975	140.00	47	5.8	--	16.0
CE 120 735414	390303076344301	217PPSC	77-03-10	465	160.00	42	5.2	--	13.0
CE 124 736872	390303076344302	217PPSC	77-06-06	716	160.00	35	5.5	--	15.0
CF 120 735563	390202076292301	217PPSC	76-10-28	548	120.00	100	5.4	--	15.0
CF 121 735559	390149076261701	217PPSC	77-05-17	416	21.00	130	6.2	--	15.0
CF 123 737258	390454076254404	217PPSC	77-05-24	317	20.00	62	5.6	--	15.0
DD 48 737317	385721076372501	211MGTY	77-08-03	300	138.00	170	6.5	--	13.0
FD 42 736678	384948076364802	211MGTY	76-12-29	550	167.00	--	6.7	--	15.0
CAROLINE COUNTY									
BD 53 730541	390227075470201	124PNPN	77-06-20	312	60.00	--	--	--	--
FC 29 730540	384216075541201	124PNPN	77-06-21	520	28.00	--	--	--	--
CARROLL COUNTY									
BF 183	393438077533501	300PRTB	77-05-10	--	880.00	--	--	--	10.0

Geologic unit (aquifer):

112CLMB - Columbia Formation
122CSLD - Cheswold Aquifer
122MNKN - Manokin Aquifer
122PCMK - Pocomoke Aquifer
124PNPN - Piney Point Formation
211MGTY - Magothy Formation
217PPSC - Patapsco Formation
217PTXN - Patuxent Formation
300PRTB - Prettyboy Schist

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	COLOR (PLAT-INUM-COBALT UNITS)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)
KENT COUNTY, DELAWARE										
ID53 6	76-12-21	0	13	8	2.5	1.6	8.4	1.4	6	5
	77-01-14	0	14	9	2.9	1.6	8.2	1.5	6	5
JD14 16	76-10-13	1	120	0	41	5.4	22	2.6	173	142
SUSSEX COUNTY										
NI51 26	77-0[illegible]-18	0	16	8	2.9	2.1	11	1.5	10	8
OI35 27	76-1[illegible]-13	1	26	13	6.2	2.5	15	3.5	16	13
	76-10-15	1	--	--	--	--	--	--	14	11
PF24 02 37160	76-11-05	0	3	0	.5	.5	4.5	1.5	9	7
PF24 03 37160	76-11-05	300	20	0	4.8	1.9	8.0	1.4	39	32
RJ22 05 037927	77-05-11	30	150	0	26	21	350	18	210	170
RJ22 06 037927	77-05-11	80	63	0	18	4.4	20	3.5	83	68
RJ22 07 037927	77-05-11	50	110	0	24	11	52	9.5	150	120
RJ22 08 037927	77-05-11	0	4000	4000	440	710	5500	80	7	6
ANNE ARUNDEL COUNTY, MARYLAND										
BF 57 736882	77-04-22	0	7	3	2.0	.6	1.5	.9	5	4
CC 114 735837	76-10-28	0	13	4	3.2	1.1	2.3	1.2	10	8
CE 120 735414	77-03-10	0	14	10	2.5	1.9	1.7	.8	5	4
CE 124 736872	77-06-06	20	2	1	.2	.4	1.7	.8	2	2
CF 120 735563	76-10-28	0	18	15	4.3	1.8	1.2	1.5	4	3
CF 121 735559	77-05-17	0	23	17	5.2	2.5	1.1	1.8	8	7
CF 123 737258	77-05-24	0	10	1	2.4	.9	1.0	1.3	11	9
DD 48 737317	77-08-03	150	72	17	24	3.0	2.1	2.9	67	55
FD 42 736678	76-12-29	5	140	31	50	4.2	1.7	3.3	136	112
CAROLINE COUNTY										
BD 53 730541	77-06-20	10	41	0	10	3.8	170	9.0	410	340
FC 29 730540	77-06-21	10	91	0	20	10	42	17	220	180
CARROLL COUNTY										
BF 183	77-05-10	0	79	60	20	7.0	19	1.6	23	19

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL CAD-MIUM (CD) (UG/L)
KENT COUNTY, DELAWARE										
ID53 6	76-12-21	11	9.0	.1	17	68	54	1.8	.01	--
	77-01-14	12	10	.1	17	72	57	1.3	.00	--
JD14 16	76-10-13	7.1	13	.1	49	225	226	.08	.04	--
SUSSEX COUNTY										
NI51 26	77-03-18	3.2	15	.0	16	77	57	4.9	.00	--
OI35 27	76-10-13	.0	37	.0	23	108	109	.18	.02	--
	76-10-15	7.0	37	.0	23	108	--	.01	.03	--
PF24 02 37160	76-11-05	.8	5.7	.0	8.9	34	27	.48	.00	--
PF24 03 37160	76-11-05	1.1	5.2	.1	27	83	72	.01	.13	--
RJ22 05 037927	77-05-11	54	460	.2	26	1010	1060	.00	.41	--
RJ22 06 037927	77-05-11	4.4	21	.1	35	144	156	.05	.16	--
RJ22 07 037927	77-05-11	8.0	60	.2	33	263	276	1.8	.17	--
RJ22 09 037927	77-05-11	1300	9500	.0	29	17200	17700	.04	.58	--
ANNE ARUNDEL COUNTY, MARYLAND										
BF 57 736882	77-04-22	11	2.6	.0	10	30	33	.09	.01	--
CC 114 735837	76-10-28	9.2	1.8	.2	8.5	20	38	.00	.00	--
CE 120 735414	77-03-10	11	1.3	.0	10	30	36	.00	.00	--
CE 124 736872	77-06-06	7.0	1.2	.0	8.8	32	25	--	--	--
CF 120 735563	76-10-28	31	1.0	.1	7.8	74	63	.01	.41	--
								.00	.04	--
CF 121 735559	77-05-17	--	--	--	--	--	--	.00	.16	--
CF 123 737258	77-05-24	16	1.0	.1	7.6	20	45	.00	.17	--
DD 48 737317	77-08-03	13	2.2	.2	29	110	118	.00	.19	--
FD 42 736678	76-12-29	27	2.1	.0	12	184	176	--	--	--
CAROLINE COUNTY										
BD 53 730541	77-06-20	5.0	7.2	1.5	43	412	456	.10	.21	--
FC 29 730540	77-06-21	6.4	3.7	.4	43	252	251	.01	.07	--
CARROLL COUNTY										
BF 183	77-05-10	2.0	42	.0	9.0	181	112	8.4	.00	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL ZINC (ZN) (UG/L)
	KENT COUNTY, DELAWARE					
ID53 6	76-12-21	150	110	30	40	--
	77-01-14	210	200	40	40	--
JD14 16	76-10-13	30	10	130	140	--
	SUSSEX COUNTY					
NI51 26	77-03-18	80	10	10	10	--
OI35 27	76-10-13	4300	4400	40	50	--
	76-10-15	4300	--	40	--	--
PF24 02 37160	76-11-05	60	30	10	0	--
PF24 03 37160	76-11-05	6000	3200	110	130	--
RJ22 05 037927	77-05-11	3000	3100	60	60	--
RJ22 06 037927	77-05-11	8900	8700	150	150	--
RJ22 07 037927	77-05-11	4600	4600	110	140	--
RJ22 08 037927	77-05-11	120000	130000	1100	1300	--
	ANNE ARUNDEL COUNTY, MARYLAND					
BF 57 736882	77-04-22	1800	2000	30	20	--
CC 114 735837	76-10-28	4200	5000	80	100	--
CE 120 735414	77-03-10	--	4000	--	60	--
CE 124 736872	77-06-06	3100	3500	80	80	--
CF 120 735563	76-10-28	--	12000	--	200	--
CF 121 735559	77-05-17	--	38000	--	240	--
CF 123 737258	77-05-24	9100	9000	70	20	--
DD 48 737317	77-08-03	7800	8400	130	130	--
FD 42 736678	76-12-29	7500	8600	140	150	--
	CAROLINE COUNTY					
BD 53 730541	77-06-20	4900	4300	40	20	--
FC 29 730540	77-06-21	440	160	60	50	--
	CARROLL COUNTY					
BF 183	77-05-10	50	50	10	10	30

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE MSL)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	AIR TEMPER-ATURE (DEG C)	TEMPER-ATURE (DEG C)
			CARROLL COUNTY, MARYLAND						
CD 179	393055077044501	300BCMV	77-04-06	--	590.00	--	--	--	52.5
		300BCMV	77-05-10	--	590.00	--	--	--	10.0
DD 185 3772	392736077034001	300PRTB	77-01-05	107	860.00	700	--	--	11.0
EC 84	392115077100401	300PRTB	77-05-10	--	820.00	--	--	--	14.0
			ST. MARYS COUNTY						
DE 40 732379	381915076315601	125AQUI	77-09-19	605	140.00	240	7.8	--	18.0
			TALBOT COUNTY						
CF 22 730798	384931075552001	124PNPN	76-10-05	370	34.00	845	8.4	--	--
		124PNPN	76-10-05	371	34.00	--	--	--	--
		124PNPN	77-06-22	371	34.00	--	--	--	--
			WICOMICO COUNTY						
DB 56 733163	381844075532801	211MNMT	77-06-24	1023	10.00	--	--	--	--
			WORCESTER COUNTY						
AH 6 70 9	382632075031801	122MNKN	76-12-21	373	5.00	--	--	--	15.5
AH 33 72 62	382630075032201	122MNKN	76-12-17	450	5.00	--	--	--	--
		122MNKN	76-12-21	450	5.00	--	--	--	--
		122MNKN	77-05-26	450	5.00	--	--	--	17.5
AH 34 72 59	382632075031901	122MNKN	76-10-26	450	5.00	480	--	--	16.5
		122MNKN	76-12-07	450	5.00	--	--	--	--
		122MNKN	77-04-21	450	5.00	--	--	--	17.0
		122MNKN	77-05-26	450	5.00	--	--	--	17.5
AH 36 730517	382635075030602	122MNKN	76-10-26	431	10.00	--	--	--	17.0
AH 37 730518	382635075030603	122MNKN	76-10-27	478	10.00	1430	--	--	17.0
		122MNKN	76-12-17	478	10.00	1490	--	--	--
BG 47	382325075063301	122MNKN	76-10-28	268	5.00	--	--	--	16.5
BG 48	382325075063302	122MNKN	76-10-28	420	5.00	485	--	--	17.0
BH 84	382215075041901	112PLSC	76-10-27	86	5.00	--	--	--	16.0
BH 85	382215075041902	122PCMK	76-10-27	195	5.00	--	--	--	17.5

Geologic unit (aquifer):

112PLSC - Pleistocene series
122MNKN - Manokin Aquifer
122PCMK - Pocomoke Aquifer
124PNPN - Piney Point Formation
125AQUI - Aquia Formation
211MNMT - Monmouth Formation
300BCMV - Bachman Valley Formation
300PRTB - Prettyboy Schist

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

	LOCAL IDENT-I-FIER	DATE OF SAMPLE	COLOR (PLAT-INUM-COBALT UNITS)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)
					CARROLL COUNTY, MARYLAND						
CD 179		77-04-06	5	--	--	--	--	--	--	100	82
		77-05-10	0	110	25	30	7.5	2.1	.7	98	80
DD 185	3772	77-01-05	--	170	170	22	28	--	--	2	2
EC 84		77-05-10	0	26	19	4.8	3.3	3.2	3.4	8	7
					ST. MARYS COUNTY						
DE 40	732379	77-09-19	2	18	0	4.7	1.5	34	9.2	110	90
					TALBOT COUNTY						
CF 22	730798	76-10-05	7	18	0	3.8	2.0	210	5.8	577	535
		76-10-05	--	--	--	--	--	--	--	--	--
		77-06-22	10	11	0	1.1	2.1	220	6.6	590	480
					WICOMICO COUNTY						
DB 56	733163	77-06-24	10	310	0	60	39	1300	31	690	570
					WORCESTER COUNTY						
AH 6	70 9	76-12-21	50	98	0	26	6.0	21	3.6	112	92
AH 33	72 62	76-12-17	--	--	--	--	--	--	--	--	--
		76-12-21	--	--	--	--	--	--	--	--	--
		77-05-26	55	--	--	--	--	--	--	--	--
AH 34	72 59	76-10-26	--	--	--	--	--	--	--	91	75
		76-12-07	--	--	--	--	--	--	--	--	--
		77-04-21	300	--	--	--	--	--	--	--	--
		77-05-26	150	--	--	--	--	--	--	100	82
AH 36	730517	76-10-26	--	--	--	--	--	--	--	110	90
AH 37	730518	76-10-27	--	--	--	--	--	--	--	--	--
		76-12-17	--	--	--	--	--	--	--	--	--
BG 47		76-10-28	35	68	0	15	7.3	56	5.8	116	95
BG 48		76-10-28	60	70	0	15	8.0	65	7.1	130	107
BH 84		76-10-27	--	--	--	--	--	--	--	--	--
BH 85		76-10-27	--	--	--	--	--	--	--	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

LOCAL IDENT-I-FIER	DATE OF SAMPLE	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL CAD-MIUM (CD) (UG/L)
CARROLL COUNTY, MARYLAND										
CD 179	77-04-06	9.7	3.6	.0	10	--	--	2.4	.01	--
	77-05-10	9.1	4.0	.0	9.6	125	111	2.3	.01	0
DD 185 3772	77-01-05	--	62	--	--	--	--	60	--	--
EC 84	77-05-10	4.4	6.6	.0	5.0	61	35	5.1	.01	0
ST. MARYS COUNTY										
DE 40 732379	77-09-19	8.4	5.7	.1	11	126	129	.04	.01	--
TALBOT COUNTY										
CF 22 730798	76-10-05	5.4	2.8	1.7	28	574	581	.09	.19	--
	76-10-05	--	--	--	--	--	--	--	--	--
	77-06-22	6.9	3.0	1.7	28	560	560	.01	.19	--
WICOMICO COUNTY										
DB 56 733163	77-06-24	610	1200	1.6	51	3490	3640	.06	.67	--
WORCESTER COUNTY										
AH 6 70 9	76-12-21	1.7	30	.1	35	286	261	.00	.46	--
AH 33 72 62	76-12-17	--	120	--	--	--	--	--	--	--
	76-12-21	--	120	--	--	--	--	--	--	--
	77-05-26	.3	87	.1	33	272	--	.86	.07	--
AH 34 72 59	76-10-26	--	84	--	--	--	--	--	--	--
	76-12-07	--	87	--	--	--	--	--	--	--
	77-04-21	2.1	88	.1	33	276	--	.84	.21	--
	77-05-26	.5	80	.3	34	267	--	.95	.16	--
AH 36 730517	76-10-26	--	180	--	--	--	--	--	--	--
AH 37 730518	76-10-27	--	340	--	--	--	--	--	--	--
	76-12-17	--	360	--	--	--	--	--	--	--
BH 47	76-10-28	.7	68	.1	36	224	246	.00	.27	--
BG 48	76-10-28	1.2	87	.2	37	267	285	.00	.29	--
BH 84	76-10-27	--	39	--	--	--	--	--	--	--
BH 85	76-10-27	--	46	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MULTIPLE STATION LISTING

	LOCAL IDENT-I-FIER	DATE OF SAMPLE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL ZINC (ZN) (UG/L)
		CARROLL COUNTY, MARYLAND					
CD 179		77-04-06	100	--	10	--	--
		77-05-10	50	80	10	10	20
DD 185	3772	77-01-05	--	--	--	--	--
EC 84		77-05-10	560	70	30	10	30
		ST. MARYS COUNTY					
DE 40	732379	77-09-19	200	100	10	0	--
		TALBOT COUNTY					
CF 22	730798	76-10-05	220	220	10	0	--
		76-10-05	--	--	--	--	--
		77-06-22	360	190	20	10	--
		WICOMICO COUNTY					
DB 56	733163	77-06-24	7600	6300	40	30	--
		WORCESTER COUNTY					
AH 6	70 9	76-12-21	83000	82000	270	260	--
AH 33	72 62	76-12-17	--	--	--	--	--
		76-12-21	--	--	--	--	--
		77-05-26	5200	--	150	--	--
AH 34	72 59	76-10-26	--	--	--	--	--
		76-12-07	--	--	--	--	--
		77-04-21	1900	--	140	--	--
		77-05-26	1900	--	130	--	--
AH 36	730517	76-10-26	15000	--	--	--	--
AH 37	730518	76-10-27	4300	--	--	--	--
		76-12-17	--	--	--	--	--
BG 47		76-10-28	7400	100	120	120	--
BG 48		76-10-28	4300	400	100	100	--
BH 84		76-10-27	6300	--	--	--	--
BH 85		76-10-27	4400	--	--	--	--

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October 13, 1977

FACTORS FOR CONVERTING U.S. CUSTOMARY UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the U.S. customary units published herein to the International System of Units (SI). Subsequent reports will contain both the U.S. customary and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply U.S. customary units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons